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HEALTH RULES *and* DANGER SIGNALS

EDNA EUGENIA LOWE



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To all those who are interested in the rules of health, the prevention of sickness and the promotion of hygienic living; to those who are willing to aid nature in her work by the adoption of a system of daily exercise; and to all teachers who are seeking to know how to develop, in their pupils, physical as well as mental efficiency; this book is affectionately dedicated.

"Health and Happiness come to us not as rewards of merit but as proofs of worth. They are not recompenses for abnegation but natural satisfactions in normal life, incalculable results of real deserving."

—*Bliss Carmen*

PUBLISHER'S FOREWORD

BY

FRED HIGH

Col. George W. Bain wrote a book and those of us who have heard the grand old man eloquent who has never failed to touch our lives and to inspire us to higher thoughts and nobler ideals prize that book because we can read more into it than the printer was able to crowd upon its pages. Long after Col. Bain shall have passed away, thousands will hear again and again his matchless eloquence as we read his book and contemplate his noble ideals.

We believe that the time has come when the book-maker can give an author the same introduction to the reading public which is given to a speaker, or lecturer about to address an audience. We create an atmosphere for an artist, for a musician, for a reader, why not do as much for an author? We inform an audience of the merits of a lecturer, point out his claims upon our attention and we believe it is just as wise to introduce an author to his or her readers for we know from personal experience the enhanced value that a book has to one who knows the author.

We have prevailed upon Miss Lowe to allow us to break down the barriers of custom, therefore we present her in this publisher's foreword with the one purpose of giving each reader that personal interest which always accompanies even a slight acquaintance with an author. We believe that thousands who have

formed a passing acquaintance with Miss Lowe as a chautauqua lecturer, reader, (and director of play); thousands who know her as teacher and friend will, after reading this publisher's foreword, all the better read into her writings that same enthusiasm, scholarship, high purpose, and splendid idealism, which has always actuated her.

Miss Lowe has been one of the genuine successes and benefactors of the chautauqua fraternity. Mr. A. L. Flude of the Chautauqua Managers Association, who for years has handled her chautauqua bookings, pays her his tribute:

"It has been recognized by every representative on the Chautauqua Managers Association force that Miss Edna Eugenia Lowe has been giving the Chautauquas more real service in proportion to the fee than any other speaker. I have known her in exceptional cases, where a committee was in need, to give a health lecture each day for a week, present each afternoon at four o'clock, an hour's program of readings, take charge of a woman's class of hygiene each day, and then find time to direct the children's hour. That, of course, was an exceptional case. But the most exceptional fact about it is that whether it is her readings or her lectures, or her class work, whatever she undertakes seems to stand out as just a little better than anything of the kind which has been presented before. I know of no one who seems able to carry as heavy a load and carry it so easily and so effectively as Miss Lowe. Her splendid physique emphasizes the correctness of her health gospel. Her charm of personality adds effectiveness to her platform messages. Her perseverance and mentality insure that her efforts

either upon the platform or in authorship will be altogether worth while."

Miss Lowe is a graduate of the Northwestern University School of Oratory. She was Director of Physical Education and Instructor in the department of Oratory in Carleton College, at Northfield, Minnesota, for five years. At present she is a member of the faculty of the Highland Park College, Des Moines, Iowa, where she is Director of the Physical Education for Women and an Instructor in the Oratory School. She is both student and teacher.

In my younger days having stood on the threshold of the great beyond with a doctor's permit to die of consumption before spring, having in life's race been handicapped by sickness and constant pain, having been able to build up my own body and mind by following many of the same suggestions as set forth by Miss Lowe, it is, therefore, with more than ordinary interest that we undertake the publication of this splendid volume.

To the rules, exercises, practices, and formulas Miss Lowe presents should be added this one thought which should permeate your every act. It is found concealed in one of the Proverbs of Solomon, "A merry heart doeth good like medicine," and since the advent of the Beauty Doctor makes homeliness unethical and unnecessary, it may be well to remember that "A merry heart maketh a cheerful countenance."

It does even more, for as Robert Burton, in his famous *Anatomy of Melancholy*, says: "Mirth purgeth the blood, confirms health, causeth a fresh, pleasing, and fine color, prorogues life, whets the wit, makes

the body young, lively, and fit for any manner of employment."

To those of you who look to "Dr. Merry" for your prescriptions, we firmly believe that this volume reveals the secrets of how to enjoy health, happiness, and spiritual prosperity and a casual obedience to its mandates will prolong your days upon the earth.

Since doctors have to show their credentials before they are allowed to practice and since this volume is nothing short of a "Home Physician," it is no more than right that we should present here the credentials of the author with the hope that these credentials will aid each one who reads this volume to extract as much benefit from the author's philosophy and teachings as I received from a slight acquaintance with them even when only partially understood and practiced.

PREFACE

For the past six years I have been talking to Chautauqua audiences on the general subject "Danger Signals on The Road to Health," endeavoring to call attention to some of the laws of health most frequently broken, and trying to show how many of our common ills might be prevented or overcome by right living.

From year to year there has been an increasing demand for the lectures and exercises in printed form but I have hesitated because part of my material has been taken from books of prominent authors, and is not entirely my own. Much of it, however, has been obtained from my own study and some has come to me from my teaching experience.

I am especially indebted to Dr. William Latson, who was, for many years before his death, editor of the Health Culture Magazine and who is the author of several excellent books on health subjects.

After much persuasion by friends, and audiences with whom I have worked each year, I have finally taken what I consider the best from several systems of Physical Training, added many suggestions of my own, and am now bringing to them, in this little book, what I hope may prove to be, some practical hints on the Art of Keeping Well.

Whether or not the reader will agree with me, if this will only start him to thinking and investigating for himself, the mission of the writer will have been accomplished.

Realizing, too, the value of including Physical Education in the school curriculum and knowing that many teachers have had no preparation for this work, it has seemed wise to devote a part of this book to suggestions, corrective exercises, games and drills for the benefit of teachers who may be interested in developing in their pupils, healthy bodies as well as trained minds.

INTRODUCTION

Health is the most precious gift in the world, and yet how little it is appreciated until disease steps in and for a time usurps its place. Then there comes a realization of what a strong healthy body means.

It is almost impossible to get people to give attention to the laws of nature until sickness and suffering have crossed their pathway and forced them to face the consequences of their own misdeeds; then, and usually not until then, are they ready to give some thought and effort to right living.

Many times each year has the writer of these pages been told, "I am perfectly well; why should I listen to your health lectures." The old adage, "An ounce of prevention is worth a pound of cure," is applicable here as well as in other places. Such a person should be grateful for good health, and willing and eager to take steps to preserve it. I believe sickness never comes unless Nature's laws have been broken. In other words, I believe if we could perfectly understand the rules of health and could obey them implicitly, that sickness could be entirely banished from our lives. But in our modern civilization, in the rush of our busy lives, we are drifting away from the laws of Nature, and we find no time for health rules until necessity demands that we call a halt and take an inventory of our habits of living; then, often, we find

that we have wandered so far from the right way that the backward journey is a slow and difficult one.

After studying the laws of health and noting how the majority of Americans live, the wonder is not "Why are people sick?" but rather, "Why are they not always sick?" Yet in many cases, it is ignorance rather than lack of interest that is responsible for mistakes in living. Many are seeking help and are anxious to follow the suggestions when once they have been made clear. For such, books and magazines on health subjects are of vital importance and it is the aim of the writer to make the directions in the following chapters so clear and simple that all can understand, and so practical that all can follow.

Others approve of the health rules but say they are too busy to put them into practice. This argument is rather a weak one for we have all the time there is, and it is only a question of how we dispose of it. We usually make time for the things we most want; if health is what we really desire, we will take time to cultivate it when once our interest is aroused.

I believe, too, that severe sickness never comes without Nature's having sent out her danger signals as a warning that something was wrong with the bodily mechanism. These various signals, pain, headache, backache, indigestion, tired, sluggish feelings are such common ailments that they are usually considered of no consequence and are passed by unheeded. True, they are not serious in themselves, but they are symptoms of more serious troubles which are likely to follow unless the cause of the difficulty is found and removed. With a little study and atten-

tion on our part many of these signals can be interpreted and successfully treated in the home. Simple hygienic methods of living, deep breathing, bathing, diet, water drinking, exercise, fresh air, and sunshine, will often work miracles toward restoring health and happiness, and the best part of all is that they can be had by all "without money and without price." And yet, their very cheapness and abundance work as a disadvantage. If they could be put up in capsules at some far corner of the earth and sold at a great price, people would rush pellmell after them, and purchase and use them in large quantities; but it is hard to realize that anything so cheap and so common really has intrinsic value.

Hygienic living is being emphasized in our colleges today; courses in physiology, anatomy, and practical hygiene are being offered and Physical Education is a required subject in many schools. It is to be hoped that the day will soon come when it will be introduced into the grades and high schools all over our land, for it is the growing child that most needs this training. While the bodies are developing, and regular habits are being formed, courses in physical training and hygienic living are far more practical and valuable than in later life when the muscles have lost their flexibility and daily habits have been established. To-day, the first year in the college gymnasium is largely devoted to the correction of physical defects caused by bad habits formed in the grades and high schools. Many pupils are permitted to graduate from our high schools without a word having been said to them about the carriage of the body, the correct sitting position, proper breathing or other laws of hygiene

and the result is, except for the few that enter our colleges, that they go into their life work with round shoulders, depressed chests, protruding shoulder blades, or spinal curvature, any of which mean low vitality and a lack in general efficiency.

The importance of physical education and right habits of living is demonstrated by the improvement in the general health of students after a year or two of training. To those who have not witnessed or experienced these changes in the physical condition, the splendid things accomplished can scarcely be credited, but every year from our colleges go thousands who are willing to testify that the value of such work can scarcely be overestimated.

But if your school days are over and you have not been offered these subjects, do not feel that your chances for health culture are gone. To be sure, your progress will not be so rapid as it would have been in the earlier days when the muscles were more easily trained, and habits were being formed, but attention to right living, and a little systematic practice each day will do much toward preserving health, if you are still well, or leading you back to health if you have wandered away.

ILLUSTRATIONS

	Frontispiece
	Page
Exercise III	33
Exercise IV	34
Exercise V	51
Exercise VI	52
Exercise VII	69
Exercise VIII	70
Exercise IX	87
Exercise X	88
Exercise XI	105
Exercise XII	106
Rocky Mountain Climbers' Club	
Chautauqua Camp Scene	
Ladies' Rest Tent	123
Scarf Fantastics	124
Venetian Floral Dance	
May Pole Dance	
Queen of the May	141
Children's Free Morning Hour Work	
Mother Goose Spectacle	
Spanish Dance	142

CONTENTS

Preface

Introduction

- I Poise—Standing Position—Sitting Position—
How to Sit Down and Rise from a Chair—
How to Climb Stairs—Poise May be Main-
tained in Stooping Position—Exercises for
Poise—Improper Poise Causes Displaced
Organs—Exercises to Restore Displaced Or-
gans.
- II Walking—Some Bad Habits—Weight Tran-
sference—Heel Striking—Narrow Base—Spe-
cial Exercises Designed to Overcome Faults
in Walking.
- III The Elimination of Bodily Waste—The Five
Eliminating Organs.
- IV Breathing—The Work of the Lungs—How to
Teach Proper Breathing—How to Obtain
Lung Power—Exercises for a Daily System
of Practice—Exercises for Muscular Flexibil-
ity—Additional Exercises for Gymnasium
Use.
- V The Liver—Symptoms of a Deranged Liver—
Causes of Liver Disorder—Treatment for
Liver Trouble—Special Exercises to Aid the
Liver.
- VI The Skin—Bathing—How—When.
- VII The Bowels—Constipation—Causes—Treatment
—The Internal Bath—Exercises for Constipa-
tion.

- VIII The Kidneys—Causes of Kidney Disorder—How We May Aid Them in Their Work.
- IX Nervousness—Symptoms—What Nervousness Means—Causes—Treatment—Relaxation Exercises.
- X A Few Suggestions About Sleep—Causes of Insomnia—Treatment.
- XI Indigestion—Some Bad Habits in Regard to Food—Quantity—Mastication—Eating when Fatigued—Mental State Affects Digestion—Eating at Too Frequent Intervals—Eating on Trains—Violent Exercise Near the Meal Hour.
- XII Colds—Causes of the Ordinary Cold—Treatment—How to Harden the System Against Colds.
- XIII Suggestions to Teachers of Physical Education—What to Work For in Each Class Period—Qualifications of a Good Physical Director.
- XIV How and When to Exercise.
- XV Exercises for Muscular Development—Muscles of the Arms and Legs—Muscles of the Abdomen and Back.
- XVI Games for the Playground and Gymnasium Use.
- XVII Special Drills for Exhibitions—May Pole Drill—Scarf Fantastics—Rose Drill—Veteran Floral Drill.
- XVIII Special Drills for Gymnasium Use—Pole Drill, Wand Drills, Nos. 1, 2 and 3—Dumb Bells (Anvil Chorus) and Advanced Drill, Medicine Ball Movements.

Lao-tse, a Chinese philosopher born about five hundred years before Christ, said: "You can have neither a greater nor a lesser dominion than that over self."

POISE

CHAPTER I.

Standing Position—Natural poise means, of course, an erect position of the body, with the weight well forward on the balls of the feet, hips and abdomen held back, chest forward and high and head erect, but many people, in striving to retain this position, tense the muscles of the back and acquire a stiff, unnatural carriage. Backache, a waste of nervous energy and an unattractive appearance is usually the result. The back muscles should never be held tense and if you persist in doing so, Nature is certain to send backache as a danger signal.

Years of experience with students in the gymnasium has convinced the writer that the less said about proper carriage the better, for when the mind becomes centered on the personal appearance, the standing position, or the walk, the individual becomes self-conscious and awkward.

Let the teacher remind the student frequently to lift the chest high, to be tall, and then give daily exercises which will throw the body into the proper attitude without calling attention to it. If these exercises are continued for a time the person will unconsciously take the correct posture and the muscles, free from tention, will become strong enough to hold the body in place.

If you are in doubt about your poise, rise to tiptoe

and then come slowly back to position, holding the weight forward where it naturally falls, then lift your chest and you will be standing correctly. This is a reliable test, and you will find, if your weight is forward on the balls of the feet and your chest is raised, that your hips and abdomen will take care of themselves. Just as soon as the weight sinks back upon the heels, poise is lost; every organ is tipped out of place and every function is likely to be impaired.

It is a mistake to tell the round-shouldered child in the home to throw his shoulders back, for the result usually obtained from following this instruction is tense back muscles, and protruding shoulder blades. Tell him, rather, to lift his chest, "hitch" his chest, as well as his "wagon, to a star" and he is far more likely to assume the correct position.

Sitting Position.—It is just as important that you sit correctly as it is that you stand correctly. Sit well back in the chair with chest erect. Be careful not to slide forward and sit on the backbone. This is a vulgar, and far from an attractive position, as well as a very harmful one. The weight of the upper body causes pressure on the nerves at the base of the spine, and every organ in the trunk sags downward out of its proper place. The lungs are crowded, making it impossible to breathe freely and deeply; the heart action is made difficult because of the crowded condition and the stomach, liver, intestines and kidneys are hampered in their important work by lack of room and by poor circulation.

It is necessary that the chair in which you sit dur-

ing working hours be of the proper height. Children in the school room should be placed in seats where they can sit well back and still have their feet resting on the floor. Much spinal trouble is caused in this way by carelessness on the part of the teacher.

How to Sit Down and Rise from a Chair.—When sitting down, place one foot flat on the floor and well back against the chair, then by bending the knee of the same leg sway the body gently back upon the seat, keeping the chest erect. To rise from the chair place one foot flat on the floor, drawing it back close to the seat, then by pressing downward with that foot gently lift the weight, still keeping the chest erect. This leaves the other foot free to take the first step in walking. Many people have a decided chest movement both in sitting down and rising from a chair. This is unnecessary. You will find, with a little practice, that perfect poise can be maintained here as well as at other times.

Keep Poise While Climbing Stairs.—Stair climbing is an excellent exercise if correctly done, but many people suffer with backache because of wrong habits in this regard.

The usual tendency is to run up the steps on the balls of the feet and in a stooping posture. This crowds the heart and lungs, and puts the burden upon the muscles of the back instead of upon the calves of the legs where it belongs.

The fact that you are panting for breath and that the heart is beating with unusual rapidity when you

reach the top of a flight of stairs, or a hill, proves the first statement. The normal action of these organs has been interfered with and they are trying to make up for it. If the heart and lungs ever need room and freedom, it is when climbing an elevation.

If you doubt the second statement, place your hands on the back midway between the waist line and the base of the spine, run up stairs in the usual manner and feel the pull on those muscles. Then try the following suggestion and notice how the muscles of the back are relieved and how the leg muscles go to work. Place the entire right foot flat on the step, then by a slight upward springing motion with the left foot lift your weight up, then place the left foot flat on the next step and with another slight spring make the right leg lift your weight, keeping the chest erect all the time. If you have not been using this method of stair climbing the muscles in the calves of the legs will probably become sore and ache at first, an indication that they are weak from non-use and need development. They will soon adjust themselves to the work if you persist in using them. The muscles of the back were never meant for work of that nature and their aching is a danger signal sent out to remind you of the mistake.

Poise May be Maintained in a Stooping Posture.—

When stooping to pick up some article from the floor, always bend the knee next to the object, and you will find it very easy to keep your balance, and then when you come back to erect position the other foot is free to take the next step in walking. If the article is on

your right and you bend your left knee as you stoop for it, the line of balance is broken and you are likely to have difficulty in maintaining or regaining your equilibrium. You will find, too, that you appear to much better advantage by bending the knee as you stoop, than by bending forward from the waist line with knees stiff, as many people do. This is a little thing of course, but it is the little things in our general appearance which make pleasing or disagreeable impressions on those about us.

Exercises for Poise.—Below are a number of poise exercises, which, if practiced faithfully, will bring the body into proper position and will, by so doing, improve not only the general appearance but the general health as well.

I

Rise slowly to tiptoes, hold a few seconds, come slowly back to place, keeping the weight well forward on the balls of the feet.

II

Place right foot out at the right front diagonal without weight (4 counts), slowly transfer weight with the chest leading you forward, (4 counts), rise to tiptoes and hold (4 counts), weight down (4 counts), weight back to left foot without changing the position of the right foot (4 counts), again rise to tiptoes (4 counts), weight down and feet together (4 counts).

Repeat placing left foot forward.

III

Place right foot out at right diagonal (4 counts), transfer weight to right foot, chest high (4 counts), lift right arm up to right front diagonal, lift left foot off the floor and

stretch left arm back downward toward rear left diagonal. Hold the position from (4 to 8 counts), the right arm stretching firmly upward toward ceiling and the left arm and leg stretching back downward toward floor. Position (4 counts).

Repeat placing left foot forward. (See Figure III.)

IV

Stand, chest high, hands on hips, **slowly** raise the right leg up in front of the body keeping the knee straight. Raise as high as you can without straining back or abdominal muscles, and hold position for a few seconds, then **slowly** bring it back to place. This must be done slowly and steadily. This exercise is not only beneficial for the control of poise but is especially good for strengthening the muscles of the abdomen and back.

V

Same as IV using the left foot.

VI

Same as IV bring right foot out to right side.

VII

Same as VI bringing left foot out to left side.

VIII

Place right foot forward without weight, place finger tips on the chest, and spring weight lightly forward to right foot, bending right knee low, at the same time throwing arms out at sides and raise chest high toward ceiling with head thrown back—then spring weight lightly backward to left foot, bending left knee low and bring finger tips back to chest, chest still held high and head thrown back.

Keep chest strong and high during the exercise, do not bend toward right or left. Work for lightness and airiness of movement, coming up to tiptoes with each spring. This is a beautiful exercise when properly done, and if combined with deep breathing, inhaling as you spring forward and exhaling as you go back, it has a double value. (See Figure IV.)

IX

Stand, feet wide apart, hands on hips, rise to tiptoes and come down to a squat position—hold a few seconds, then come back to erect posture.

Improper Poise Causes Displaced Organs.—Sagging, displaced organs is one of the most common causes of disease. Each organ in the trunk is held in place by ligaments or supports and in direct relation to every other organ. These supports, when in a healthy condition, have elasticity enough to allow the organs to rise and fall when a person is running, or jumping, and yet restore them to their proper place and hold them there. But when these organs are crowded down and held down hours every day by improper sitting or standing positions or by improper clothing, lack of room for free motion interferes with their work; the blood cannot circulate freely and furnish these ligaments with nourishment; and shallow breathing, caused by the cramped, stooping chest, keeps the lungs from doing their work properly, so that the blood that does reach these supports is likely to be full of poison instead of life-giving elements. Thus in time these ligaments become weak, they lose their elasticity and allow these organs to sag downward and stay out of place.

This is one of the most frequent causes of painful menstruation. The vital organs are crowded down out of their places, and they, in turn, crowd the pelvic organs so that free circulation is impossible. Thus these organs starved for lack of nourishment and poisoned by bad blood become weak and congested.

It is a very common occurrence in gymnasium work for young women, who have suffered severely at the menstruation period, to get decided relief and often be permanently cured by a system of upward stretch-

ing movements which tend to lift the organs up where they belong, thus giving each one a better opportunity to perform its particular function, and making it possible for the blood to circulate freely and provide nourishment, and at the same time remove and prevent an accumulation of poisonous waste.

Stretching Exercises To Restore Displaced Organs.

—Below are a few exercises especially designed to lift the organs upward to their proper place in the trunk.

I

Stand, feet together, inhale, at same time bringing arms upward in front of body, palms downward, until they stretch toward ceiling above head. Look upward and try to touch an imaginary object just beyond reach. Hold stretch as long as you can hold breath, then exhale and relax. Never strain in stretching work.

II

Stand, feet together, inhale, bringing arms up at the sides, palms down. Stretch firmly from side to side, and hold stretch as long as you can hold breath, then exhale and relax.

III

Place right foot forward at right diagonal, shift weight forward, inhale, at same time raise right arm to upward right diagonal. Look up and try to touch finger tips to touch an imaginary object just beyond reach. Hold stretch as long as you can hold breath, then exhale, and relax. Same on left side.

IV

Lie flat on the back, arms above head flat on floor. Inhale and stretch from finger tips to toes, holding stretch as long as you can hold breath, then exhale and relax.

V

Lying flat on back, inhale and stretch from right foot to finger tips of left hand, both leg and arm lying flat on floor. Exhale and relax.

Reverse the stretch, stretching from left foot to right hand.

This diagonal stretch reaches muscles which the straight stretch fails to find.

Why We Should Act.

Throughout this volume, many suggestions are given in regard to health rules, diet, exercise and the various things which help to keep this bodily machine running smoothly, most of them a prevention of sickness rather than a cure, although simple home treatment is suggested in a few instances. If you will give some of them a trial it is certain that you will consider it time and effort well expended.

We have made great headway in our battle against tuberculosis, typhoid fever, and other contagious diseases. But we are falling far short of even holding our own when it comes to the organic troubles such as Bright's disease, heart and kidney affections, apoplexy, and other like causes of our taking off. These are on a frightful increase. We have decreased the death rate considerably; but this saving has been made by our increasing skill in preserving the lives of children under five. By neglect to practice simple precautionary measures we have materially increased the death rate in persons over thirty. The decreasing rate among children is partly due to improved housing conditions. It is astonishing the effect which apparently trivial things may have upon the life and happiness of the race. For instance, the United States Department of Labor reports that in homes where water had to be carried in from out doors the infant mortality was 198 per 1000, as against 118 per 1000 where water was piped into the house!. Such phases of the health question are for economists and sociologists. Individual health is a matter of individual care. It is to aid in the battle for health and happiness that these pages are presented.

WALKING

Some Bad Habits and How They May Be Overcome

CHAPTER II.

Walking is an excellent exercise when done correctly and under proper conditions.

Women are often hampered by high heels, and long, narrow or heavy skirts. Any article of clothing which interferes with freedom of motion is a menace to health.

In these days of automobiles, walking for exercise is fast becoming a lost art, and the general health is suffering because of it. Many people, especially those whose work keeps them indoors a large part of the time, would be greatly benefited by a good, brisk walk in the open air each day. To get the best results from walking you should get off from cement walks and pavement and come in contact with Mother Earth. If this is impossible have rubber heels put on your shoes. This will do away with some of the jarring produced by striking the heels upon the hard surface.

Below are a few suggestions in regard to walking which may be helpful.

I

First, work for proper poise, holding the chest high and the head erect.

II

Learn to transfer the weight. The whole foot should be placed flat on the floor without weight, then the weight transferred with the chest leading. Study a little child learning to walk if you want a good example of this. The child will place one foot forward, then very slowly, and with difficulty, balance the weight over the forward foot before trying to take the next step.

III

Do not strike the heels. The above method of weight transference does away with heel striking which is very injurious for two reasons. First, it is a continual drain on the nervous system, and it causes a constant jarring of the organs of the trunk, stretching and weakening the ligaments which hold them in place, and often bringing about a displacement or downward sagging of the organs.

IV

Walk with narrow base. In correct walking the heel should cut a straight line, and the toes should point outward. Try walking on a crack in the floor and see how nearly your heels come to striking the mark, or better still, walk a few steps in the snow, and then go back and see how far apart the heel lines are. A narrow base does away with pigeon toed walking, and with the pronounced hip movement or waddle which we frequently see.

V

Use the legs only, keeping the upper body, the part above the waist line, quiet. The legs should swing freely from the hips, the length of the step being determined by the height of the person, but both health and grace demand a loose, free swing of the leg in walking, and the knee, of course, should not bend.

Exercises for the Correction of Faults in Walking.

Below are some special exercises which, if used frequently in class work, will tend to overcome these various faults, the aim being to throw the body into the proper position without constantly calling attention to the faults themselves.

I

Slow, rhythmic walking. Right foot forward without weight (4 counts), transfer weight, chest leading (4 counts) then left foot forward (4 counts) etc. Work for rhythmic movements, with no jerkiness, taking the entire four counts for each part. Place hand on chest and feel the expression die out as foot goes forward and chest sinks downward, then as weight goes forward the chest full of energy and expression should come up under the hand.

Next try two counts instead of four to each part, and finally, but one count when the exercise is well worked out.

II

Place hands on hips, swing right leg freely forward (2 counts) swing it backward (2 counts) forward again (2 counts) then while foot is forward take a step, (2 counts). Same with left foot. Keep chest erect, and perfectly quiet and work for freedom of leg motion. The knee should not bend as the leg goes backward.

III

Hands on hips, cross right foot over left knee (2 counts), touch right toes lightly to floor in front (2 counts), cross right foot over left knee again (2 counts) then step lightly forward with right foot (2 counts), watching weight transference. Same with left foot. Have good sprightly music for this and aim to give up to the music and make the exercise as graceful and artistic as possible.

IV

Hands on hips, swing right leg forward in a free circle from the hip, touching right toes to the floor on the left

side of the body (4 counts), swing right leg back and around in a free back circle, touch toes to the floor on the left side (4 counts), swing right leg forward again in a front circle touching toes to left side (4 counts), then take a step (4 counts). Same with left leg. Keep the knee straight and work for a loose, free, swinging motion.

V

Hands on hips, bend right knee and raise right foot from the floor (2 counts), stretch leg straight forward toward the front (2 counts). Place right foot forward on floor without weight (2 counts), slowly transfer weight (2 counts). Same with left foot.

VI

Touch toes of right foot lightly to the floor in front three times (3 counts) bend right knee and hold foot up on fourth count, trip lightly forward three steps with right foot leading (3 counts), and hold left foot up with knee bent, on the fourth count. Then touch toes of left foot three times, etc., continuing the movement. Work for lightness on feet and strong chest work.

VII

When No. VI is well worked out, make it more difficult by taking the three tripping steps and then wheel and rear face on count four. Give the order thus:—Touch right foot three times, hold on four, run three steps, wheel and rear face on four, touch left foot three times, hold on four, trip forward three steps, wheel and rear face, etc. Pivot toward right when weight is on right foot, and toward left when on left foot.

This is a difficult exercise for it requires good poise to make the sharp turn, keep one's balance and be ready to start with the other foot on the next count.

VIII

Same as VI, combining a hand motion, thus:—Hands on hips, touch toes three times, hold foot up on count four, run three steps, at the same time clapping hands in front of body, then back of body, then front again, placing hands on hips as you hold foot up on count four.

This requires much practice and better still, much mental concentration, and when mastered will be one step toward bringing the muscular system under the control of the mind.

IX

Just the same as VIII excepting that the hands are to be clapped first above head, then back of body, then above head, and placed on hips on fourth count.

X

Same as IX clapping hands forward, then above head, then behind body, and on hips on count four.

The object of this kind of work is to get mind and body working together, mental control over the physical.

XI

Have class join hands in a large circle, hop on right foot, at same time crossing left foot above right knee, then hop on left foot crossing right foot over left knee, advancing toward right with each hop. Work for lightness on feet, spring high but catch the weight and endeavor to make no noise as foot touches the floor.

XII

When the class has worked out No. XI, combine the sideward twist of the body, turning well toward right when you hop on right foot, then toward left as you hop on left foot.

This varies the exercise and gives an excellent liver squeezer movement at the same time.

This drill works out best with $4/4$ time. Each movement should be used from six to twelve times according to the judgment of the teacher.



FIGURE III



FIGURE IV

THE ELIMINATION OF BODILY WASTE

CHAPTER III.

By elimination we mean casting out of the body all that is superfluous and injurious. There are two kinds of waste matter forming daily; waste from the dying cells, the broken down tissues of the body, and waste which comes from the food. In nearly all kinds of food there are portions incapable of being digested and assimilated and should, therefore, be promptly cast out of the system. We sometimes compare this waste to the chaff which comes from the grain, or the ashes from the coal. In either case the useful parts are taken out and utilized, and the remainder is cast aside. On the promptness of this eliminating process depends the health of the person concerned. Internal cleanliness means a healthy body. Internal uncleanness means disease and suffering, the name of the disease being dependent on the particular portion of the body affected by the poison, and the effort of the system in trying to get rid of it.

Bouchard, a French pathologist, after years of careful study and investigation, tells us that there is enough poison manufactured every few hours in a normal, healthy body to cause instant death if retained in the blood and tissues. He tells us, also, that if every eliminating organ is in perfect condition, properly caring for the bodily waste, that they are just about able to cast off the poison and keep the body clean.

The finest particle of dust in the delicate works of a watch will throw it out of order. Think then, how the intricate mechanism of this bodily machine must be affected by the waste matter which is constantly clogging it.

There are five organs designed by nature for this important work, the lungs, liver, kidneys, bowels and skin. The liquid poison of the blood is acted on by the liver and expelled through the skin and kidneys, and the gaseous poisons removed through the lungs.

The following suggestions will help to show how we, by simple, natural, hygienic living, and a system of free exercise, may aid these organs in their work and, by so doing, take a long step toward permanent health and efficiency.

BREATHING

The Work of the Lungs

CHAPTER IV.

"He lives most life who breathes most air." Few people who have not had special training in the gymnasium or in some kind of voice culture, are good breathers; most of them gasp instead of breathe.

Breathing is one of the most important parts of the bodily organism. Every function is dependent on the blood for nourishment, and the blood, in turn, is dependent on the lungs for purification and oxygen. The blood comes to the lungs every few minutes laden with poison which it has picked up in its circuit around the body. If you are a deep breather, the poison is thrown off and fresh oxygen is carried back to the blood, but if you are a gasper, part of the poison is retained, and but a small amount of oxygen taken in, thus the body is both poisoned and suffocated.

Men, as a rule, are better breathers than women, due to modes of dress. Any article of clothing which interferes with the free expansion of the diaphragm, or that has a tendency to draw the shoulders forward, prevents normal breathing and therefore injures health. Corsets and tight skirt bands with women and heavy coats with men often hinder nature in this respect.

Proper Breathing.—Imagine that you have on a rubber girdle about twelve inches in width, six inches above and six inches below the waist line. Take a short breath, stretching the girdle well, hold that breath and inhale once more, stretching the girdle as far as possible without straining, hold that also, and inhale again, this time filling up to the top of the lungs,—exhale.

Place hand over the imaginary girdle and be sure that it expands and contracts. In this manner the attention will be directed to the expansion of the entire diaphragm, rather than to any particular set of muscles, as is often emphasized in breathing instructions. It is a simple effective method and can be taught to children as easily as to adults, and if there are no restrictions from tight clothing, free normal lung expansion will result from the practice.

Always inhale and exhale through the nose. Air that is taken in through the nose is warmed, moistened and purified while that which goes in through the mouth is cold, dry and full of impurities. Mouth breathing is always a danger signal indicating adenoids or some obstruction of the air passages. A specialist should be consulted and the difficulty removed, if possible, else the general health will suffer.

How to Obtain Lung Power.—Many people go through life with drooping shoulders and cramped chests, which means shallow breathing and low vitality. This condition is usually brought about by improper dress or incorrect poise in sitting or standing. Many occupations of daily life make this stooping position necessary for hours during the day.

This causes the shoulders to droop, and the muscles which hold them in place become weaker and weaker until the person is unable to maintain an erect carriage. It then becomes necessary to resort to shoulder braces or exercises which will pull the shoulders back to place and restore the muscles to normal strength. Shoulder braces will give no permanent relief and should be strongly advised against. As long as they do the work, holding the shoulders up, the muscles themselves will become more weak and flabby. Use makes a muscle strong, non-use makes it weak.

To get lung power it is necessary, first, to raise and develop the chest so that there will be room for the lungs to work, for they can expand to the sides of the muscular box, or chest in which they are confined, and can go no farther, no matter how faithfully you practice deep breathing.

Whenever necessity demands the stooping position several hours daily, it seems only reasonable that something should be done to counteract the influence and draw the shoulders back where they belong.

Here are a few simple exercises designed to strengthen weak muscles of the chest and shoulders, thus raising and broadening the chest and giving the lungs more room in which to expand. Many exercises could be given for this purpose, but there are certain muscles which we want to reach, and for a system of daily practice, a few exercises wisely planned will bring results as well as an elaborate course.

Exercises for a Daily System of Practice.

I

Stand, weight on the balls of the feet, inhale, bringing the arms up in front of the body, (palms down), until finger tips stretch upward toward ceiling. Hold the stretch a few seconds, then exhale, forcing arms back and down, crowding shoulder blades together until they meet in the back. Keep the elbows straight and the weight forward on the balls of the feet during the exercise. There is always a tendency to bend backward as the arms go back, thus putting the pull on the muscles of the abdomen instead of on those of the chest where it belongs.

Try to remember nose breathing and free lung expansion while practicing.

II

Stand, weight forward, inhale, bringing arms up at sides (palms up) until finger tips meet above head. Exhale, forcing shoulder blades together as arms go back.

III

Place finger tips on the front of the shoulders, bringing elbows forward in a front circle until wrists meet in front of chest, inhale again, bringing elbows on up toward ceiling, thus completing the half circle,—exhale, forcing elbows on around toward rear, shoulder blades meeting in the back.

The elbows should make a complete circle in this exercise. This is especially effective when some one grasps the elbow and forces them around for you. A much freer motion and a firmer pull on the muscles is thus obtained. (See Figure V.)

Exercises for Flexibility.—For adults whose muscles have become set and tense, a few exercises for flexibility will aid greatly in this work.

I

Stand erect, inhale and clap hands first in front of the body as far out as you can reach, then behind the body as far as you can reach, continuing as long as you can hold breath, then exhale. Repeat several times.

Be careful to keep body erect, for there is always a tendency to bend forward as arms go backward, thus relieving the muscular pull for which we are striving.

II

Swing right arm forward, then up and around in a big, free circle. Continue swinging until the arm feels as if it would fly out of its socket.

Then try the left arm until you get the same freedom of motion; then swing both arms together.

III

Place right foot well forward at the right front diagonal, inhale, throwing weight forward, at the same time swinging both arms out and up to the right diagonal, then sway weight backward to left rear diagonal, look backward and swing arms backward and upward with the weight.

Continue this movement, swaying weight forward and backward, until arms are swinging loosely and without effort. Work for freedom and looseness of motion. This is a very valuable exercise, for if correctly done every muscle in the body is brought into play. (See Figure VI.)

Additional Exercises for Gymnasium Use.—The exercises already given in this chapter are all that are necessary for general practice, but for the benefit of teachers who must work for variety in order to interest the pupils, I am adding a few excellent breathing exercises which can be successfully used in class work.

I

Inhale, raise shoulders, stretching upward from the waist line, lower shoulders, still holding the breath, then exhale.

II

Place right foot in front of body without weight, place hands, palms downward, in front of chest with elbows bent, (Fig. VII) inhale, spring weight forward to right foot bending right knee low, at the same time thrust hands forward to parallel position, palms still down (Fig. VIII). Now exhale, springing weight back to left foot, and taking a wide swimming stroke with the arms, bringing hands back to place in front of chest (Figure VII again.)

Repeat, placing left foot forward.

III

Stand, feet wide apart, hands on hips, inhale, bending slowly forward from the waist line, keeping eyes on ceiling. Exhale coming back to place. Be sure to keep eyes on ceiling, for this forces the head back and stretches the long muscles of the trunk. (Figure IX.)

IV

Same as Number Three, bending to right and left side with eyes on ceiling during the exercise.

V

Stand, feet wide apart, bend forward and place backs of hands together between knees, inhale, come up to erect position, sweeping arms upward to overhead, keeping the backs of the hands together, as arms come up in front of body.

Stretch firmly upward, then bend forward once more, sweeping arms downward, out at sides and back to place between knees, exhaling as you come back to place. Here we have the liver squeezer, and the upward stretch combined with the muscular work. (Figure X.)

VI

Stand, feet together, clasp hands together behind body (locking the fingers), inhale, forcing the thumbs down toward the floor and on out toward the rear, the palms of the hands down. Exhale, turning thumbs back to position. (Fig. XI.)

Be sure to force the thumbs **down**, do not raise them upward as you will be inclined to do. For round shoulders and drooping chest, it would be difficult to find a better exercise.

THE LIVER

CHAPTER V.

Few people pay any attention to the liver until it gets out of order and causes trouble, then on investigation they learn that that organ has been constantly abused and overworked until Nature can endure it no longer and is forced to interfere.

The liver, with possibly the exception of the kidneys, is the most abused organ in the body. About five quarts of blood passes through it every minute, and if the amount of blood purified by the liver in a day's time could be measured, it is estimated that it would amount to about sixty barrels. The liver plays an important part in both digestion and elimination, for after purifying the blood, the waste substance called bile, instead of being cast aside, is used to help digest the food. Thus we find a waste product utilized.

The liver is long suffering, and many danger signals are sent out to warn a person of its sluggish condition before serious symptoms appear. Below are a few of the signals.

Symptoms of an Overworked Liver.

Dizziness—If reaching upward causes things to turn black before your eyes and makes you light headed or dizzy it is usually Nature's warning to you that the liver is clogged and needs attention. This dizzy feeling often comes when you stand erect after sitting or lying down. It is almost a certain sign of an overtaxed liver.

Sallow Skin or Liver Spots.—If the skin has a sallow, yellow color or if little brown blotches appear on its surface, usually on the face or neck, it is an indication that the liver is unable to perform its normal function and the skin has assumed some of the responsibility. It is a danger signal which should not be passed by unheeded.

A Dull Heavy Ache In The Region of the Liver.—Another indication of liver disorder is a sluggish, uncomfortable feeling often felt on the right side above the waist line, sometimes in the front and sometimes in the back of the body. It is seldom a sharp pain but more usually a dull ache or a feeling as if a heavy pressure were being exerted on that portion of the anatomy.

Drowsiness.—If you feel drowsy and stupid, especially after meals, it is usually an indication that you are eating too much and exercising too little, and that your liver is paying the penalty.

Causes of Liver Disorder.

Next let us consider some of the more common causes of liver disorder.

Improper Dress.—Any article of clothing snug enough to retard the circulation, or stiff enough to interfere with perfect freedom of movement, hinders the liver in its work. Corsets, tight girdles, and tight skirt bands must be placed in this class.

Dr. Susanna W. Dodds, in one of her books on health, has this significant paragraph, "The abdominal walls are soft and yielding. Below the ribs there

is no bony frame work to resist external force, and anything which constricts these parts is bound to press upon the liver and other organs, and interferes with their functional action. We laugh at the Chinese who bandage and deform the feet of their women. But we shut our eyes to the fact that American girls and women, by their modes of dress, distort organs which are far more essential to life and health than the foot. This is a shame and a disgrace to our civilization."

Not until we can create in the hearts of women, a greater respect for these bodies, which St. Paul terms, "The Temples of the Holy Spirit," and less respect for the fads and fallacies of changing fashion, can we hope to make advancement in dress reform. And until women are willing to use good sense and good judgment in their modes of dress, they are bound to be, to a certain extent, a race of weaklings and easy prey to the surgeon's knife.

Overeating.—Overeating always means overworked organs and the liver is apt to have to bear the brunt of the burden. The excessive use of fats and sweets must be especially guarded against, for when there are more of these foods than the system requires, the liver makes a strenuous effort to gather up and care for the surplus, and in doing so it is often overworked, and becomes enlarged, congested and often times inflamed. Neither should starches be partaken of too freely, for in the process of digestion starches are changed into glucose, a form of sugar, and this is very clogging to the liver.

All this emphasizes the importance of a balanced

ration so that the system will not be clogged by a surplus of any one type of food.

Lack of Free Exercise.—If you study liver disorder, you will find that it seldom comes to the person whose daily labor calls for free bending and twisting movements, and especially if this work is done in the open air. For instance, the man who works on the section or who pitches bundles in the harvest field, or the woman who scrubs floors for a living, is not the man or woman who complains of a sluggish liver. Neither is liver disorder common among children, for in romping, jumping, twisting and squirming about in their free play, the liver is kept stirred up and active.

It is the sedentary worker or the one who stands for hours of the day with no free exercise who usually has trouble of this nature, and it is with just such people that we plead for a system of daily exercise, in order that the blood may be kept circulating freely and the organs assisted in their work.

Treatment for Disordered Liver.

Now we come to the most practical part of the chapter. What are we going to do to prevent the liver from becoming sluggish, and if it is already in bad condition is there anything we can do to relieve it? There are several very simple things which come within the range of every person really interested enough to give the suggestion a trial.

Correct Your Habits of Diet.—Study your own eating habits and find out what is wrong. If you are a victim of a sluggish liver you will have to guard against the excessive use of sweets, starches and fats

and substitute fresh vegetables and acid fruits for a time at least. The blood is usually too thick in such cases and the fruit juices will help to dilute it.

In serious cases a short fast is beneficial. If you feel that you must have food, eat sparingly and choose foods which tax the digestive and eliminating organs as little as possible.

Drink Plenty of Water.—Free water drinking is helpful, and a weakened solution of lemon juice, about a half a lemon to a glass of water, and without sugar, will help to unclog the liver and start the bile to flowing. It is usually best to take this in the morning about a half hour before eating and the last thing before retiring at night.

Give Attention to the Other Eliminating Organs.—See that these organs are caring for their share of the poison so that the liver is not overworked, and in case of jaundice and serious liver disorder, it would be well to give these organs a little extra work for the time being and let the liver rest and get back to normal condition. Aid the skin by frequent warm bathing with an occasional sweat bath; flush the kidneys by drinking plenty of water; and be sure that the bowels are acting freely. A daily enema is a wonderful assistance at such a time. Keep up deep breathing in the open air so that the lungs can throw off their full share of waste.

Adopt a System of Liver Exercises.—The following exercises, if faithfully practiced, will do much toward keeping the liver active and in order. However, one must be comparatively strong in order to stand them, and in case of jaundice or serious liver affection, you

should begin very gradually for the liver may be enlarged or congested and too strenuous treatment sometimes causes injury.

Exercises to Aid the Liver.

I

Stand, raise arms above the head and let them fall heavily downward and backward as far as they can go, swing them back up over the head and let them fall downward again. Continue this until the arms are swinging freely and loosely upward and downward without effort. Work for looseness and relaxation. Then combine the head motion, swinging head back as arms go back and letting it drop forward as arms fall downward. When you have mastered this so that the neck muscles are relaxed, combine the muscles of the shoulders and chest, making a slight bow as arms come downward. Continue, making a larger bow each time until the entire upper body is sweeping downward and the finger tips finally touch the floor.

Then when you have learned to let go of the muscular tension, combine deep breathing. Hold the breath as long as you can without straining, then let it go and take in another breath.

II

Stand, feet wide apart, throw both arms around to the right, letting them wrap limply around the body, then throw them around to the left. Continue flopping them from side to side until all stiffness has left them and they are wrapping around the body like a cloth wraps around a clothes line on a windy day. Then, gradually begin twisting the body around from left to right, working in unison with the arms. Turn farther each time until you are twisting as far around to each side as possible. Then combine the deep breathing, holding the breath as long as possible without straining, then let it slip away and inhale again.

First try wrapping arms around your waist, then bend forward and wrap them around the knees, then when you have learned to do this fairly well, bend farther forward and try wrapping them around the ankles.

III

Stand, with feet wide apart, place hands on hips, inhale and bend first to the right side, then to the left. Bend as

many times as you can while holding the breath, then exhale and repeat.

If you bend the right knee as you bend toward the right and the left knee as you bend toward the left you will find that you get a much freer bend of the body from the waist line.

IV

Exercise No. III in the chapter on Breathing, under the head "Exercises For Flexibility" is an excellent liver exercise.

You will have noticed, perhaps, that the above exercises are somewhat different from those usually designated as liver squeezers. Many teachers and many books of instruction give the same movements but with the body held tense during the exercise. For instance, No. 1 would be given thus—Stand, stretch arms firmly upward, inhale, bend forward and touch toes, upward stretch, touch toes, etc., and No. 2 would be given,—Stand, arms stretching firmly outward, shoulders high, inhale and slowly twist first right, then left.

I have a theory that the loose, relaxing method is far the best. The other is a needless waste of energy. We Americans live so fast, and waste so much strength in our daily work, that a system of exercise to be really valuable for adults should be planned to conserve instead of waste vital force. And then, instead of having certain exercises for breathing, some for the liver and some for relaxation, it seems wise, whenever possible, to put them all in one general movement and thus save time and effort. It is difficult enough to get people to try them at all, and the fewer exercises prescribed, the easier the task will appear and the more courage they will have to make the attempt. The liver movements as given above crowd

the liver, and at the same time combine breathing and relaxation.

The word flopping, used frequently in the directions for relaxing work, is not a dignified term, but I use it advisedly. For several years I tried to teach relaxation without being satisfied with the results, then one day, while striving to get pupils to let go of the tension and relax, I happened to say flop and every person in the class flopped. Since that day, I have used it often, and always, with good results.

Be sure to combine the deep breathing with the liver squeezers, for that puts fresh oxygen into the blood, and the bending, twisting movements crowd the liver thus squeezing the impure blood out and making room for the good blood to circulate.

I once heard this process compared to the cleansing of a sponge, the cells of which had been clogged with dirt, and it was the most helpful illustration which ever came to me about the liver and its work. If you dip a dirty sponge in clean water, then squeeze it with the hand, you squeeze dirty water out, at the same time making room in the cells for fresh water to enter. Each time that you squeeze dirty water out, and dip the sponge in fresh water again, you aid in cleansing the cells and making it possible for clean, pure water to circulate.

So with the liver, each time you take a deep breath of pure, fresh air you help to purify the blood, and with the bending, twisting movements you help crowd the bad blood from the liver, and leave room for the purified blood to enter.



FIGURE V



FIGURE VI

THE SKIN AND ITS WORK

CHAPTER VI.

The importance of the work of the skin is often underestimated. Few people realize just how important a part it plays in this elimination process. Many think that a warm bath once a week is sufficient, while others are content with less than that in extreme cold weather.

The skin has two important functions, that of casting off poison and taking in oxygen. We breathe through the skin as well as through the lungs. There are millions of little sweat glands, twenty-five hundred to the square inch in some portions of the body which, many times a day, send their tiny tubes to the surface laden with poison. If the pores are open, this poison is thrown off and fresh oxygen is carried back to the blood, but if the pores are clogged by insufficient bathing, this action cannot take place, thus poisoning and suffocating the system. This is one reason why frequent bathing is necessary. Then, the outer, horny layer of the skin is constantly dying and these dead scales must be removed by bathing and rubbing.

Nearly all doctors and health culturists agree that a warm, cleansing bath at least twice or three times a week is essential for purposes of both health and cleanliness. These little tubes come to the surface with their poison many times a day, not just on Saturday night.

This does not necessarily mean getting in a tub of water each time, in fact for weak, nervous people this is hardly advisable, for many find frequent tub bathing rather weakening. For such people the warm tub bath once a week with a warm sponge bath on the other days is an ideal arrangement. If you can have access to the warm shower or spray bath let that take the place of the sponge bath for it is much more enjoyable and satisfactory.

How to Bathe.

Baths may be cold, tepid, warm or hot. To a certain extent each individual must decide which bath is best adapted to himself, but there are a few general suggestions which it may be well to consider.

The Cold Plunge Bath.—The cold plunge bath, jumping into a tub of cold water, is a severe shock to the nervous system, and a needless waste of vital force and it is a question whether any one profits by it in the long run. A strong, vigorous person may get a quick reaction and feel fine after the cold plunge, but each time he does it he robs his system of vitality and few people can afford to waste strength in that manner. It is certain that delicate, nervous people should not use the cold plunge.

The Cold Sponge Bath.—The cool or cold sponge bath is splendid for many people. This is not a cleansing process but it exhilarates the circulation, tones up the skin and serves to give it resistance power so that colds are more easily avoided.

Many delicate people, people of nervous temperament, however, are doing themselves an injury by the

cold bath. Their vitality is already lowered, and the cold bath often uses more energy than they have to spare. Here is a pretty good test. If you can get out of bed in the morning, take a cold sponge bath followed by vigorous massage, and get a prompt reaction, feel warm and glowing afterward, and there comes over you no feeling of chilliness or weariness several hours later, then the cold bath is for you. But if this "all gone" tired feeling comes each day about noon or a little later, try omitting the cold sponge for a week or ten days and note whether the tired feeling still appears. If it does not, then it is an indication that the cold bath was using up more vitality than you could conveniently spare, and it had better be omitted permanently.

The Cold Air Bath.—If the cold water bath does not agree with you, try the air bath. I mean by that, letting the air come in direct contact with the entire surface of the body from ten to twenty minutes daily.

For nervous people and people of lowered vitality I know of no better tonic. Of course, if the weather is cold, great precaution must be taken against allowing the body to become chilled. Keep the blood circulating by deep breathing, vigorous massage, by slapping the skin or by free exercise; and never allow yourself to chill. It is best to begin this practice in warm weather and then gradually accustom yourself to the cool air as the cold weather comes on. In winter, take the air bath in a partially heated room but see that the air is not stale.

Many a person with a nervous break down has found that the sun and air baths have worked wonders toward bringing about a recovery. The fresh air in

contact with the skin helps it to discharge poison, and take in oxygen; the exercise and massage increases the circulation; the deep breathing helps the lungs to throw off more poison, and carries more oxygen into the blood; and the general result is, that tired, sluggish feelings are banished, and fresh, invigorating ones appear in their place. This is a wonderful help toward hardening the person against colds as well as a tonic for the nervous system.

The Warm Bath.—The warm or tepid soap scrub followed by the cold sponge or shower is the ideal bath. The cleansing bath must be warm because the secretions sent out by the skin are oily in substance and it requires warm water and soap to dissolve them and properly cleanse the skin. The warm bath should be followed by rinsing with cold water for two reasons, first, and most important, the warm water expands the pores and if they are left in this condition the first cold draft which strikes the body is apt to cause a chill and a cold may result. The cold water will close the pores, leaving them in normal condition and also start the blood to circulating. The second reason for the cold sponge or shower is that after the bath, the body is covered with a coating of soap and this should be thoroughly rinsed off, for if left to dry, it will clog the pores.

If dashing cold water over the body causes a nervous shock try applying it with the hands. Fill the hands with water and apply it to the skin; go over the body quickly and then follow that by a vigorous massage. This seems to cause less of a shock than the other methods and will accomplish the same results.

The Hot Bath.—The hot or sweat bath is excellent for the treatment of disease; for breaking up a cold or helping to free the body from poison, but it is very debilitating. It is another extreme measure which uses up vitality and it is a question whether it is wise to use it as a regular bath. Certainly it should not be taken oftener than once a week and most authorities agree that the warm water answers every purpose as a cleansing process and should be used in place of hot water except when a sweat is needed for the elimination of waste.

The Use of a Flesh Brush.—For bathing it is a good plan to use a brush with fairly stiff bristles, for the bristles get into the pores and help to dislodge the waste. A soft camels hair brush should be used on the face, but a stiff brush is more satisfactory for the rest of the body.

Do Not Remain Long in the Water.—It is a mistake to remain in the water too long at a time, because it wastes vitality. For the tub bath, from three to ten minutes is long enough, the length of time being determined somewhat by the strength of the person. Many people, at summer resorts, injure themselves by going into the water too often and remaining too long at a time. From twenty to thirty minutes I should say is long enough and I am convinced that a shorter time would be better in many cases, especially if the water is cold.

Massage.—Massage is an important part of the bath, in cold weather the skin should be rubbed until it is warm and glowing, but in hot weather if you want a cool, refreshing feeling after the bath, dry the skin

carefully but do not massage vigorously for that exhilarates the circulation and increases the sensations of heat.

There are many appliances on the market for purposes of massage, and many of them are very good, but the ordinary Turkish towel is less expensive and just as satisfactory as most of them. Many people prefer a glove made of Turkish toweling to a regular towel because it is so much handier to use, but anything which leaves the skin red and tingling answers the purpose.

When to Bathe.

Baths may be taken any time that suits the convenience of the person concerned, except within a half hour before and two hours after eating a meal. Vital functions should not interfere with each other. After eating, the blood is needed around the digestive organs to help manufacture digestive juices and aid in the process of digestion, and a bath taken at that time draws the blood to the surface of the body and therefore hinders nature's work.

THE BOWELS

Constipation

CHAPTER VII.

Constipation is the foundation of many ills, "the mother of disease." It is simply the failure of the bowels to cast out of the body the waste that has been left in the large intestine after the nutritious part of the food has been assimilated.

An old Scotch physician once said, "We ha' only twa' things to keep in meend, and they'll serve us for here and herea'ter, one is au' ways to hae the fear o'the Laird before our e'es, that'll do for herea'ter, and th' t'other is to keep our boo'els au' ways open, and that'll do for here."

Another authority says "In the race of life a man with educated bowels will eclipse the man with an educated brain—but why not have both?"

The bowels play a most important part in this eliminating process, and when they fail to discharge their share of the bodily waste, the system is soon filled with poison, the person feels dull and sluggish, and if the constipated condition continues, every vital function is affected. When a physician is summoned, regardless of the nature of the illness, the first question usually asked is, "How have the bowels been acting," and the same answer is usually received, "They have not been acting at all."

Causes of Constipation.

Neglect to Attend to the Bowels Regularly.—Constipation is frequently caused by failure on our part to work with Nature and give attention to her call. When the intestines are ready to throw off their load of waste, a nervous message is sent from the nerve center of the abdomen (often termed the abdominal brain), up to the brain announcing the fact. The message, if not heeded at first, is usually repeated several times, but if no response is received, the nerves finally cease in their efforts and the bowels do not act. Then the process of absorption begins, and the glands, according to their function, begin to absorb the liquid contents of the intestines, and this poison is finally taken up by the blood and carried in its course around the body.

A regular time each day, preferably in the morning, should be chosen in which to attend to this part of the bodily mechanism, and one should be persistent in his efforts until a regular habit is established.

Children have a right to know and should be taught the importance of a daily evacuation of the bowels, for carelessness in childhood often results in chronic constipation in later life.

Lack of Fluid in the System.—Many cases of constipation are caused by water starvation. As has been stated elsewhere, at least eight glasses of water are required daily, in order to keep the system in good condition. This should be taken in the morning, about a half hour before breakfast, between meals and just before retiring at night. The less taken with the

meals the better. Ice water, however, should be shunned, or if used at all, should be sipped very slowly. Dr. Wiley, the pure food advocate says, "Pouring ice water into the stomach where the natural temperature is about blood heat, is a severe shock to the stomach, the pores are immediately closed and it takes a long time for the body to throw off the congestion. Summer drinks should not be below 60 degrees, Fahrenheit; ice drinks are twice that cold."

Overeating.—An excessive amount of food overtaxes the organs of digestion and elimination and the bowels usually are called upon to attend to more than their share of the work. Heavy, stimulating foods overtax the bowels. A simple, nutritious diet always promotes health.

Improper Clothing.—Corsets and tight skirt bands interfere with the action of the intestines. Pressure on the transverse colon often partially closes this tube making it difficult for the contents to pass. In case of tight lacing, the tube is some times entirely closed so that no passage can take place until the garment is removed. This same pressure often retards the circulation making it impossible for good blood to reach the abdominal muscles. They, therefore, become weak and flabby and unable to force the contents of the colon forward with enough force and rapidity to prevent stagnation and keep the passage clean.

Weakened Nerves.—In case of lowered vitality, the nerves, because of impure blood or poor circulation or both, become so weakened that they fail to carry the

messages sent from the nerve center of the abdomen to the brain, and peristaltic action, that wormlike movement of the intestines, becomes slow and weak and the result is constipation. The remedy for this condition is to build up the system, purify the blood and equalize the circulation, so that these nerves will be nourished and stimulated.

A few exercises will be given at the end of the chapter that are especially adapted to relieve this nervous debility.

Treatment for Constipation.

Diet.—There are certain foods which are said to be constipating and should be avoided by those having trouble of this nature. No ironclad rules can be laid down in regard to diet, each individual must study his own case and use his good judgment in making a decision, but a list of foods generally considered to be constipating may help some one in making a choice.

Constipating Foods.

Pickles	Cornstarch
Spices	Boiled Milk
Cheese	Excessive Use of Meat
Tea	Soups
Coffee	Gruels
Fine White Flour	Liquid Diet
Rice	

A liquid diet is bad for the bowels because there must be some solid foods, some bulk in order to aid peristaltic action.

Foods Said To Aid the Bowels.

Brown Bread	Greens
Whole Wheat Bread	Parsnips
Soft Boiled Eggs	Carrots
Butter	Raw Cabbage
Cream	Melons
Nuts (especially pecans and Brazil nuts)	Prunes
Olive Oil	Plums
Ripe olives	Rhubarb
Berries	Dates
Fresh vegetables	Figs
Lettuce	Apples
Onions	Raisins
Asparagus	Oranges
	Grapefruit

Water Drinking.—One physician says, "Water is the only justifiable cathartic." In the treatment of constipation, when trying to avoid the use of drugs, try taking a teaspoon of table salt in a glass of water a short time before breakfast. For most people this acts very quickly and causes a free movement of the bowels. This cannot be recommended as a regular practice, however, for large quantities of salt are apt to overtax the kidneys, but for a short time, while trying to establish a regular habit, or used occasionally, it is far safer than many cathartics which are in general use.

Keep the Liver and Skin Active.—If the liver and the skin are doing their work well, the bowels are not apt to be overworked, but defective secretion of the bile by the liver, or a clogged inactive skin, affects the bowels directly, making them care for more than their share of the bodily waste.

The Internal Bath.—The value of the internal bath can scarcely be overestimated, especially for people troubled with constipation. However, I believe every person, whether conscious of constipation or not, would be benefited by the occasional use of the internal bath, for a daily movement of the bowels does not necessarily indicate that the person is free from constipation. Dr. Forest in his book, "The New Method" says, "Constipation means a loaded colon; now, if from one end of this organ a small portion is discharged daily, the colon still remains full by addition at the other end, and thus constipation is present and continuous, even if there be a daily discharge." With the internal bath, the colon is flushed and the poisonous contents removed. This is decidedly beneficial, and in addition to this, the injection of hot water, by coming in contact with the nerves of the liver, stomach and kidneys, greatly stimulate their action, giving them health and vigor.

Of course it is not wise to become dependent on the injection any more than it is to depend on a cathartic for a daily movement of the bowels, but if one must resort to either, surely a cleansing with pure water is far more justifiable than the use of strong drugs. However, attention to diet, water drinking, exercise and massage, with an occasional high enema will usually give relief to the most stubborn cases.

There are several methods used in this kind of treatment, but probably the best thing on the market is the J. B. L. Cascade, invented and sold by Dr. Charles A. Tyrrell, 134 West 65th St., New York City. This is superior to the fountain syringe in many

respects. There is a large rubber bag upon which the person sits and the weight of the body forces the water upward into the colon. In this way the water is carried farther up than with the other methods and the treatment is more thorough, and it is much easier and more convenient to use than the fountain syringe. With the Cascade, are sent two books on health subjects and full directions as to its use.

If the Cascade is not available, the method next to be recommended is Doctor Wright's Colon Syringe. This has a long, flexible, rubber tube, the entire length of which is inserted in the colon. This carries the water much further than the ordinary syringe. Full directions as to its use can be obtained from Dr. Forest's book, "The New Method," published by the Health Culture Company, Passaic, New Jersey. The flexible, rubber tube can be obtained from your druggist, however, and used on any fountain syringe. The best results from the enema usually come from the use of light soap suds made of ivory or castile soap, and water as warm as can be borne comfortably by the hands. When the water is turned on, aid the flow by gently rubbing the abdomen upward along the course of the colon from left to right. Use as much water as you can stand, then turn it off and wait a few minutes, and often, after a short interval, more can be taken. Retain the water as long as possible, then, when you begin to expel it, gently knead the abdomen, this time rubbing from right to left.

The hot water is rather debilitating and if used frequently it should be followed by an injection of cool water after the colon has been properly emptied. The

cool water tones up the mucous membrane, equalizes the circulation, does away with the weakening effect, and helps to bring about a normal action of the intestines the following day.

Massage.—Kneading the bowels and a thorough massage along the course of the colon is a wonderful help in cases of constipation. Lie flat on the back, bend the knees and draw the feet up toward the hips. This relaxes the muscles of the abdomen so that the massage is more effective. Now, take the tips of the fingers and begin at the lower, right side of the abdomen and follow the course of the colon with a vigorous, rotary motion. First, follow the ascending colon upward on the right side, then go over the transverse colon which passes across the abdomen just below the waist line, then on down over the descending colon on the left side. Do this several times, then knead the entire abdomen thoroughly, using either the finger tips or the knuckles. Do this a few minutes at night after retiring and again in the morning and you will find it a wonderful help in bringing about a regular movement of the bowels.

A Justifiable Cathartic.—Here is a recipe for a laxative which many have found to be very satisfactory. It is a nutritious food giving desired results, and none of the injurious effects which come from the use of many laxatives.

One fourth pound each of prunes, dates, figs and raisins, mixed with one half ounce of senna leaves. Wash the fruit, remove the pits from the prunes and dates and run all the fruit through a meat grinder, add the senna leaves and put it all through the grinder a

second time. This grinds the senna leaves and mixes it thoroughly with the fruit. About a teaspoonful taken at night before retiring is the usual dose. If this isn't sufficient increase it until you find the proper amount. This mixture moulded into a cake, cut in cubes and rolled in powdered sugar will keep indefinitely and is very pleasant to take.

EXERCISES FOR CONSTIPATION.

For Debilitated Nerves.—1. Stand with feet wide apart, place hands on the back of a chair, rise to tiptoes, stretching the entire body firmly upward, then bend knees and come down to a squat position, again rise to tiptoes stretching firmly upward, and come back to original position. Repeat several times.

2. Stand, feet together, and about a foot and a half from the wall, place the palms of the hands flat against the wall about the height of the chest, then, keeping the feet flat on the floor, bend forward and touch the chest against the wall. There should be a firm stretch of the abdominal muscles but no strain. If standing a foot and a half from the wall causes a strain, move a little nearer. Be sure to keep the heels flat on the floor, for if the heels come up, this allows the knees to bend and all pull on the abdominal muscles is taken away and the object of the exercise is lost.

3. Sit on a low chair or stool with the feet wide apart. Clasp the hands firmly on the top of the head, then, holding the position on the chair, inhale and twist toward the right as far as possible without a strain, then twist toward the left. Repeat several times. Figure XII.

For the Stagnated Condition of the Intestines.—4. Sit on a low stool, bend forward and touch the right hand to the floor on the right diagonal side as far out as you can reach, come up to erect position, then bend forward and touch the left hand to the left side, coming back to erect position. Alternate this movement from twenty to thirty times.

5. Sit on a low stool, clasp hands below the right knee and draw it forcibly up against the chest, then clasp hands below left knee and draw the left knee against the chest. Alternate

the movement from twenty to thirty times and do it rather rapidly.

6. Same as No. 5 lying flat upon the back.

7. Lying flat on the floor, raise the feet up over the body and touch toes to the floor just above the head, then bring them back to original position, taking care not to let the feet come down with a jolt, for this jars the pelvic organs and is a shock to the nervous system.

Electricity.—If after trying the above suggestions you are a victim of constipation, invest in an electric vibrator and use that twice a day over the region of the liver and intestines. This acts directly on the circulation, causing a freer flow of blood to the muscles, soothes the nerves and stimulates the organs to better work.



FIGURE VII



FIGURE VIII

THE KIDNEYS

CHAPTER VIII.

Causes of Kidney Disorder.

Wrong Habits of Diet.—Too much food, however excellent the quality, the excessive use of meats or other proteins, the free use of highly seasoned foods of any kind, especially salt and spices all have a tendency to overtax the kidneys.

Mineral Waters and Alcoholic Beverages.—Mineral water, alcoholic beverages, and drugs with a large percentage of alcohol affect the kidneys directly. For this reason, people addicted to the patent medicine habit are often victims of kidney trouble. If drugs are needed, it is far wiser to let a reliable physician prescribe for you, rather than to do any experimenting yourself.

Failure of the Other Eliminating Organs.—If there is a surplus of poison in the system the kidneys are certain to be overworked. This is especially true in regard to failure on the part of the skin. If the skin shirks, its work falls at once upon the kidneys. These two organs together are supposed to cast off about five pints of poison daily. Under normal conditions the skin will care for about three pints, leaving the remaining two pints for the kidneys. The skin in warm weather is far more active than in cold weather, due partly to free perspiration and partly to the stimulus which comes to it from free contact with the air.

In cold weather the skin, smothered by heavy clothing, and without free perspiration, will generally, unless the person is a frequent bather, cast off about a pint or a pint and a half of poison, leaving three and a half or four pints for the kidneys to manage.

Lack of Fluid in the System.—The habit of drinking plenty of pure water has been frequently emphasized as an important factor in the promotion of health, but no organ in the body is so directly benefited by it as the kidneys. Plenty of fluid in the system helps to flush the kidneys and carry off the poison, thus aiding them, greatly, in their work.

How We May Aid the Kidneys.

There are three simple things which can be done to help keep the kidneys in good working order.

1. Use good judgment in the selection of food.
2. Keep the skin active by frequent bathing.
3. Flush the system by drinking at least two quarts of water daily.

NERVOUSNESS

CHAPTER IX.

Nervousness or Americanitis is wide spread among our people today. Very few are exempt from the malady in one form or another, and many accept it as a matter of fact, not taking it very seriously in its early stages. We frequently hear them say, "Oh, I'm all right, just a little nervous and run down, that's all," and blindly they rush ahead until a nervous collapse overtakes them, then they suddenly discover that they have wandered far from the road to health, so far that months and often years are required for the backward journey.

When this bodily machine gets out of repair Nature always sends out her danger signals as a warning, and if people could and would but recognize and heed the signals they would truly find that "A stitch in time saves nine." The trouble is, many people do not know the signals, while others recognize them but are too busy to take heed.

If the minor symptoms of nervousness were attended to, it is safe to say that the more serious forms would never appear.

Symptoms of Nervousness.

Below are mentioned a few symptoms, which are seldom given much attention, but which are serious enough to sap the vitality and lead steadily onward to more serious forms.

Muscular Rigidity.—We mean by muscular rigidity, tense, hard muscles of the face, neck, arms, legs and back. This condition is frequently found among children. Go into our primary grades and examine the pupils, and many times you will discover drawn, set, worried expressions, twitching muscles of the eyes or face, tense, hard arm muscles and finger nails short from frequent biting. These are danger signals indicating that the nervous system is not properly nourished and the child needs attention and possibly the services of a physician.

More often this condition occurs among adults, however. In examining classes of women for work in Physical Education it is a rare and happy occasion to find, now and then, one who has kept her muscles flexible and who knows how to relax.

This is one reason why we plead for a simple system of daily exercise. No matter how much you get in your regular tasks, it is exercise under tension, and proper exercise should be done without tension. If you are not getting freedom of motion in some sport such as tennis, golf, or skating, substitute a few loose bending, twisting, stretching movements and you will be surprised to find how the muscular system will respond and loosen up.

Restlessness.—Do you ever find yourself tapping your feet against the floor, wrapping one leg around the other or one foot around the leg of a chair, drumming with the fingers, toying with your watch chain, fairly twisting into a knot, rocking vigorously backward and forward in a rocking chair, or doing a thousand other foolish and

unnecessary things of that kind? If you do, you are using up vital force, needlessly, foolishly, wasting energy that might be used for something worth while.

The only thing to do in such a case is to take yourself in hand and break the habit; put your mind on top and get your muscular system under control. No one can help you but yourself, and if you have much will power you won't need any help.

Irritability.—Are you or the children in your home easily “rubbed the wrong way”? Does some little thing annoy and irritate you and cause you to say or do something rash, something for which you are heartily ashamed in your saner moments? These things usually indicate a poisoned or insufficiently nourished nervous system and can be classed among the danger signals.

Insomnia.—Do you go to bed night after night and toss and turn in a restless manner for hours before sleep comes? Or do you drop off asleep and then awaken at two or three o'clock and stay awake until daybreak? There are other causes for insomnia, but frequently poison circulating in the blood causes an irritation of the nerves and sleeplessness is a result.

Then might be mentioned loss of memory or lack of mental concentration, signals pointing to an impoverished nervous system, and serious enough to demand careful attention. Should all these signs be passed by unheeded, your progress is apt to be blocked by nervous prostration or St. Vitas Dance. Then busy though you are, important as you are in the world's work, everything has to be suspended for

the time being and with a physician as your guide, slowly you must begin retracing your steps, sometimes fairly crawling back along the winding road toward the welcome signal "Health." How much better for all concerned had you been able to keep on the straight and narrow path, with no need for a backward journey.

What Nervousness Means.

If you can understand just what this nervous condition means in the workings of this bodily machine, you will have taken a long step toward knowing how to deal with it.

Bodily strength comes from three main sources, through the food you eat, the water you drink and the air you breathe. Daily you are manufacturing energy, and daily you are spending energy, spending it in work, recreation, thought, wrong mental states, such as worry, fear, remorse, etc., and often in the foolish ways indicated among the symptoms of nervousness at the beginning of the chapter. Now if you can plan your life so as to spend no more energy daily than your system can supply, all is apt to go fairly well, but you are soon in a sorry plight when you find it necessary to spend more than you have on hand. Overtaxed strength is likely to lead to nervous bankruptcy, just as an overdrawn bank account will lead to financial bankruptcy.

How much better if you could learn to manufacture more strength each day than is actually needed, and thus have a little stored up energy or reserve force on which to draw in an extremity.

Causes for Nervousness.

Impure Blood.—The nerves are dependent on the blood for nourishment and if the blood is deficient in life giving elements and full of poison, the nervous system must necessarily suffer.

Lowered Vitality.—Below are mentioned several things which lower the vitality and bring about a nervous condition.

Overeating.—When we eat more food than the system demands or can make use of, it means, first, that the digestive organs are overworked trying to take care of it, next, it means a surplus of waste and the eliminating organs have to come to the rescue and deal with that, and often all these overworked organs together are not equal to the task and there is an accumulation of poison which has to be taken up by the blood. The outcome of the whole process is a poisoned, overtaxed system and lowered vitality.

Overwork.—When you are worn out physically, if you can possibly stop and take a short nap or even relax for a while it will be time well spent, for fatigue is a danger signal sent out by Nature as a warning that your vitality is exhausted for the present and you need rest.

I wish that every one could be brought to recognize the importance of reserving some time during the day, at least thirty or forty minutes, for complete relaxation, relaxation of both mind and body. A nap is fine, but you do not necessarily have to lose consciousness in order to rest. Go into a well ventilated room, throw yourself down flat, a perfect dead weight

on the bed, shut out your thoughts, breathe deeply and lazily and rest. Drop asleep if you can.

Strong, vigorous people often call this laziness and scoff at the suggestion, but never mind, only give it a trial and I am sure you will find that it will add years to your life and efficiency to your service. Many a nervous break down can be thus avoided.

Lack of Exercise.—The proper kind of exercise is free exercise without tention, "exercise which gives the greatest income of force with the least expenditure of energy." A certain amount of this freedom of motion is necessary in order to aid the organs in their work and keep up the circulation.

When housekeepers are invited to join a class in Physical Education or adopt a system of exercise in their homes, the answer is usually the same, "I do my own work, my washing, sweeping, etc. I get all the physical culture I need."

That exercise is good as far as it goes, but there are muscles never reached which are growing weaker and weaker from non-use, and all of the exercise is done under tention. Proper exercise should leave one rested and refreshed, exercise from house work usually comes far short of meeting that test. For this same reason, apparatus and music have an important place in gymnasium work. Every muscle could be reached without the use of apparatus and the desired results accomplished if the work could be made attractive and the attention of the pupils held.

Plain muscular movements day after day without any musical accompaniment soon become monotonous and burdensome, but place a number of pupils on the floor at once, have a capable musician at the piano, put

Indian clubs in their hands and start them on some rhythmic drill and watch the result. Soon their interest is aroused, a sparkle comes into the eyes, and a flush to the cheeks; it ceases to be work and becomes play.

Worry—Worry is mentioned last and in the form of a climax, for it is, without doubt, the most common cause of lowered vitality. Worry is one of the most dangerous foes that crosses our pathway and one of the most difficult to resist. "Worry is lack of faith." Our Heavenly Father never asks us to perform any task beyond our strength or ability. If duty points to some certain work we may rest assured that there will be sufficient strength furnished for its performance. If we could just bring ourselves to believe this, and trust in a power far greater than ours instead of attempting so much in our own strength, I am convinced that worry might be forever banished from our lives.

Treatment for Nervousness.

Purify the Blood.

1. Deep Breathing.—If you are not a good breather, cultivate the habit, for the lungs have much to do with throwing off poison and furnishing the blood with oxygen.

2. Correct Your Habits of Diet.—If your system is poisoned by wrong diet, look into the matter and correct your mistakes. The suggestions in the chapter, "Wrong Habits In Regard to Food" may be helpful.

3. Free Exercise.—Practice the simple, light, free bending, twisting and stretching exercises suggested in the chapter on "The Liver."

Learn to Relax Tension—While waiting for a late train, do you sit on the edge of the chair, tap your foot excitedly against the floor, and with every muscle tense, wonder what you can ever, ever do to pass

the time? Or do you pace the floor with your eyes on the clock and your mind in a turmoil? This will not hurry the tardy train, and it will exhaust your energy needlessly. Serenity of mind is a wonderful help at such a time. Try to relax your body and occupy your mind with something interesting, a good story, a bit of fancy work, or better still, the people about you. Human nature is a fascinating study and there is no better place to find the various types than at a railway station.

Learn to Relax When you Sew.—When sewing, many tense the muscles of the back, neck and shoulders as well as those of the hands and arms. When the back begins to ache, raise the shoulders, stretching every muscle above the waist line, then let them drop relaxed. Do this frequently and it will help to keep the muscles from becoming tense. Have fresh air in the room and sit erect so that the lungs are not cramped. If the work must be pinned to the knee, use a foot stool, thus raising the knee instead of drooping the chest. Sewing under the most favorable conditions is hard, nervous work and a few little precautions will often relieve the strain considerably.

Running the sewing machine is considered by many women to be injurious, but often the harm comes from the use of the wrong muscles. If you sit on the edge of the chair a short distance from the machine and work the pedal, you will find that the pull comes on the muscles of the back and abdomen. These muscles are not designed for that kind of work and naturally rebel. Try pulling your chair up as close to the ma-

chine as possible, leaving room for the knee motion then sit well back upon the chair, and I think you will notice that the work of pedaling the machine is put upon the calves of the legs where it belongs.

Learn to relax while listening to a lecture, a concert or a sermon—Often we find ourselves exhausted at the end of an entertainment because we have sat with tense muscles during the performance. By using a little mental effort the muscular system can easily be gotten under control and made to relax.

Learn to Save Energy in Little Ways.—I wish more housekeepers could be induced to have a high stool near the kitchen cabinet and sit down while preparing vegetables, while ironing and even while wiping dishes. Now, I know what you are saying mentally, if not audibly. It is something like this, "Why, if my neighbors came in and found me sitting down ironing, they would call me lazy." Never mind what they say. It isn't laziness, it is good common sense, a great saving of energy and many a worn out, nervous woman would find that she had less backache, fewer aching feet, and a much better disposition if she would try the experiment.

If women could learn to "use their heads and save their feet," housework would be far less of a burden. If you will watch women work about the house and especially in the kitchen, you will find that the majority take a hundred steps where a dozen would suffice. For instance, many women wipe a few dishes, cross the room, place them in the cupboard, walk back to the cabinet, wipe a few more, make another trip, when they could just as well sit on their stool, wipe every

dish in the pan, place them all on a tray and make one trip to the cupboard do for the whole lot.

Many women, because of lack of thought, climb up and down stairs a dozen times or more, when with a little careful planning a few trips would attend to every errand. These are little things, but a little strength saved here and there in the course of the day, may mean considerable stored up energy at the end of the week, and when you have learned to conserve energy instead of wasting it, you will have taken one important step toward warding off nervousness.

Learn to Relax in Bed.—Many people sleep in a cramped position with muscles tense, and waken weary in the morning because they have been exhausting instead of gaining vital force during the night.

Exercises for Relaxation.

1. Relax the head by rolling it around in a rotary motion with the muscles of the neck free from tension. When perfectly relaxed, the chin should touch the chest as the head comes forward, the right ear touch the right shoulder as the head rolls around toward the right, and the head touch the back as it moves backward. It often requires long and faithful practice before the muscles loosen up and allow the head to rotate freely.

2. Shake the hands until all stiffness leaves the fingers and they feel as if they were about to fly off. (It sometimes helps to imagine that there are drops of water on the fingers which you are striving to shake off.)

3. Go from the hand relaxation to the wrists, flopping the hands up and down until all tension is gone from the wrists.

4. Combine elbow relaxation with the hands and wrists, flopping the elbows in a lifeless fashion.

5. Combine Numbers Two, Three and Four with springing up and down on tiptoes, working for looseness in the muscles of the feet, ankles, and the calves of the legs.

6. Add the knee relaxation to Number Five, giving away at the knees with each light spring.

7. Next, add the hip motion to Number Six, turning the body loosely from right to left. The movement of the hips in this exercise is something similar to the shrugging of the shoulders, except that the motion is from right to left instead of up and down.

8. Then still continuing the above movements loosen up the back muscles and pick the feet up in a running motion, but do not advance, simply run lightly in place. Just let go of every muscle, allowing them to be loose and free. If you will give up to these directions you will be executing a cakewalk before you are aware of it. When using these relaxing exercises in the school room, have them done to light, airy music if possible, for it makes the work more attractive and assists wonderfully in letting go of the muscular tension. It is really surprising to note how quickly a person learns to relax with this method, and how refreshed and rested one is after a few moments of practice. Then when you have learned to relax, add to that, stretching and yawning. Never suppress a yawn unless you are in polite society where it would be improper to yield to the impulse, for that is Nature's method of resting tired muscles.

HOW TO REST.

By Walter S. Whitacre.

When you're as tired as you can be,
Almost too tired to think or see,
Lie flat on your back and breathe.
Or when your mind is so perplexed,
That all your faculties are vexed,
Lie flat on your back and breathe.
Breathe way down deep and way out wide,
From top to bottom, side to side.
Not once or twice, not even thrice,
A dozen times may not suffice
To make the tensioned nerves let go,
So that the blood may freely flow—
Just lie on your back and breathe.

When you are thoroughly relaxed,
And not a nerve is overtaxed,
Stand up on your feet and stretch.
When by your feeling you have learned
That equilibrium has returned,
Stand up on your feet and stretch.
Stretch just as far as you can reach,
First up, then out, then down, till each
And every muscle, nerve and bone
Has been restored to normal tone;
Stretch just as far as ever you can,
There's nothing better for you than
To stand on your feet and stretch.

A FEW SUGGESTIONS ABOUT SLEEP

CHAPTER X.

How to Prepare for Sleep—Do not undress rapidly and jump immediately into bed with the mind alert and active, and the nervous system keyed up at the end of a strenuous day and expect restful sleep to come at once. There are a few people fortunate enough to do this but the majority either drop off into a troubled, restless sleep with nerves and muscles tense, only to awaken dull and tired in the morning, or they toss nervously about for an hour or two before they drop off into an unconscious state.

If you are not a good sleeper, do not hurry to bed, take a few moments in which to prepare for a night of rest. Brush your hair, clean your teeth, if possible, take a warm or tepid bath, but if that isn't practical bathe the hands and face at least. Then take a few loose, relaxing exercises combined with deep breathing. A few moments later to bed followed by restful sleep will mean more to you than retiring at an earlier hour and then having to impatiently wait for sleep to come.

Never sleep in any article of clothing which you have worn next to the body during the day, for these garments are saturated with poison which the skin has thrown off, and they should be hung so that the fresh air can circulate freely about them all night, in order to have them sweet and fresh for morning wear.

Heavy Bedding—If possible have your bed coverings light in weight. The main object of covering is to preserve the heat which naturally radiates from the body, and to keep the outside cold air from striking it. Light bedding will do this as well as heavy if it is properly tucked in around the sides of the bed, and you will be spared the burden of supporting a heavy weight during the night. Many people sleep under heavy woolen comforters and awaken weary in the morning without realizing the cause. Substitute blankets or light fluffy comforters and note the difference.

Proper Ventilation—Sleep out of doors as much as you can on the sleeping porch or in a tent, but if you must sleep in the house see to it that your windows are open and your room well ventilated in winter as well as in summer. Many people fear that they may catch cold from breathing cold night air, but fresh pure air from outside is not half as likely to harm you as the stale, impure air in your sleeping room. We breathe in and out about twenty times a minute, this means about nine thousand, six hundred breaths in eight hours, the usual time given to sleep. Now we are told that each out going breath poisons about half a barrel of air in the room, so you can easily imagine the condition of the air you are compelled to breathe if you are sleeping in the winter with your windows closed or open but an inch or two.

If you have but one window, raise it from the bottom and lower it from the top. This establishes a current of air, the fresh air comes in from below driving the bad air up and out, thus keeping up a circulation.



FIGURE IX



FIGURE X

Proper Position During Sleep—The most healthful position is lying on the front of the body with the head turned toward the left and without a pillow or if one be used it should be a very small one. It is usually more comfortable to flex the left knee and draw it up toward the chest, and this improves the position because it frees the left side, thus giving the heart more room for action. It is necessary to lie flat on either the back or on the front of the body in order to be perfectly relaxed and be a dead weight on the bed, and there are many reasons why it is not healthful to sleep lying on the back.

Physiologists tell us that the ligaments which hold the organs in place are so arranged as to keep them from falling out of place forward instead of backward, therefore when you lie on the front of the body every organ works with less restriction than when you are on the back.

The blood vessels which carry the blood to and from the heart are located between the vertebrae and the organs of the trunk. When you sleep on the back the weight of these organs pressing on the blood vessels interferes with the circulation making it difficult for the heart to perform its work during the night. Circulation is much freer when this pressure is removed.

Again, when you lie on the back, the weight of the stomach pressing on the solar plexus, one of the large nerve centers of the body, is apt to disturb digestion, while the other position allows the stomach to fall forward where it belongs and this difficulty is removed.

Causes of Insomnia.

When the muscles are tense there is a constant drain on the nervous system, and it is often difficult to sleep. If you do sleep with tense muscles, you do not rest properly and usually feel dull and tired in the morning. A few simple, loose, free, relaxing exercises, such as those outlined in the chapter on "Nervousness" will help to do away with this tension, thus hastening sleep and helping the system to store up instead of waste energy during the night.

Lack of Mental Relaxation—Thought, worry or any wrong mental state keeps the blood in the brain, and restful sleep never comes until the brain is drained and allowed to quiet down.

Never worry about insomnia. If you can't stop thinking, try at least, to control your thoughts, direct them into pleasant channels if possible and let them run on, they may lead you to dreamland.

Have you ever heard the clock strike twelve and thought "Here it is midnight and I haven't slept a wink. I just must get to sleep before one o'clock. Here I have a hard day's work ahead of me and I will be all worn out and in no condition to do it. I just must get to sleep before that clock strikes again."

How easy it is to work yourself up into a nervous state and how much more difficult that makes it for mental or muscular relaxation to come.

Instead of worrying and fretting about it, try to think something like this, "How tired I am, and how good it seems to lie here and rest. I'm perfectly relaxed and resting any way and I'll soon drop off

asleep." Then try slow, deep, lazy breathing, letting each breath slip away without effort. The deep breathing and relaxation helps to equalize the circulation and quiet the tired nerves, and the mental control helps to drain the blood from the brain.

Excessive Fatigue Causes Sleeplessness—Often a person is too tired to sleep. Excessive fatigue causes an excitement of the nervous system and makes a person wakeful. A warm or tepid bath is a wonderful help in a case of this kind.

Poison Circulating in the Blood—When the system is clogged with waste matter and the blood full of poison there is an irritation of the nervous system which often interferes with restful sleep.

The chapters on elimination and the five eliminating organs will tell you what to do in order to free the blood from poison.

What to Do for Insomnia.

There may be many underlying causes for sleeplessness but the immediate cause is always a congestion of blood at the base of the brain.

In order to get permanent relief you must find out the cause of the congestion and treat that, but any thing which will start the blood to circulating and relieve the pressure on the brain will afford relief for the time being.

Below are several ways by which this may be done. The one most effective in one case may not give relief in another so you will have to give some of them a trial and use the method which brings most satisfactory results to you.

Rising on Tiptoes.—Rising on tiptoes has a tendency to draw the blood down into the legs and feet, and it can be practiced while you are making preparations for bed so no time need be wasted.

Massage.—Rubbing the feet and legs vigorously will draw the blood down from the brain. This massage may be done with the hands, but it is easier and just as effective to use the feet alone for this exercise. Lie flat on the back and rub the top of the left leg with the bottom or ball of the right foot. Place the right foot on the thigh and rub vigorously downward over the knee until you reach the toes, then draw it quickly and heavily back up to the hip again. Continue this for some time, then place the right foot below the left thigh and continue the same movement, this time the top of the right foot massaging the under part of the left leg. Then alternate the movement using the left foot over the right leg. A few moments of this exercise will leave the feet and legs warm and tingling. Never try to sleep with the feet and legs cold, for even though you may drop off asleep, the muscles are apt to be tense, and the circulation disturbed and you will not rest as you should.

Head Relaxation—Rolling the head loosely around in a rotary motion helps to loosen the tension and free the blood current so that the congestion is relieved. Often the muscles of the neck are so tense and stiff that this exercise causes pain, but persistent effort gradually relaxes the muscles until the head can roll around without effort. If you do not succeed in loosening the tension in this manner, try massaging the neck and shoulder with the finger tips. Begin at

the base of the brain and follow the muscles downward, then on outward along the shoulders, using a vigorous rotary motion with the finger tips. As long as this nervous tension remains at the back of the neck the blood cannot flow freely, and more or less insomnia is certain to trouble you. If your case is so serious that you cannot relieve the tension by the above mentioned methods, you had better consult an osteopathic physician. A few such treatments will undoubtedly give you decided relief and you may be able to manage the situation yourself after a short course of treatments.

The Cold Compress for Insomnia—Wring two Turkish toweling wash cloths from cold water, preferably ice water, place one on the forehead, the other at the base of the brain, bind them on with a towel and get into bed. The cold water drives the blood away from the head, thus relieving the congestion. Many people find this a very effective method, while others get better results from a hot application at the back of the neck.

The Hot Foot Bath—Soaking the feet in hot water will start the blood to flowing downward from the brain. After holding the feet in hot water a few minutes they are always red as far up as the water has reached which indicates that the blood has been drawn down into the feet and legs.

A hot water bottle, soap stone or electric pad will serve the same purpose. The constant use of a hot application of this kind will make the feet tender and more susceptible to the cold, but the occasional use of it is entirely justifiable.

Eating Draws the Blood Down from the Brain—Many people find that eating something light just before retiring helps them to get to sleep more quickly. It is true that food taken at that time draws the blood down into the stomach thus helping to relieve the brain but it is very doubtful whether this method can be recommended. Certainly it cannot be, as a regular practice, for the overworked stomach needs all the rest it can get, and its burdens are heavy enough without adding to them a ten o'clock or midnight lunch.

How To Begin The New Day.

Let the Vital Force Come Slowly Back Into Action.—Do not jump out of bed the instant you come to consciousness and begin dressing rapidly. Save a few minutes for yourself in which to stretch and yawn and let your vital force come slowly back into action. The heart action is diminished nearly one half during sleep and should have a few minutes in which to get back to normal beating. It is a great shock not only to the heart but to the nervous system as well to begin rushing around immediately after awakening from sound sleep. If you depend upon an alarm clock to arouse you in the morning set it so that it will go off about ten minutes before you feel that you must get up.

The Morning Bath.—It is splendid to have either the cold sponge or air bath in the morning before taking up the daily routine. Suggestions in regard to these will be found in the chapter on "The Skin."

Fill the Lungs With Fresh Air—If possible, take a few deep breathing, waking up exercises before you dress. The vigorous exercises properly come in the

morning for they stimulate the circulation and put you in trim for the new day.

Flush the System With Fresh Water—Drink a glass or two of water at least a half hour before breakfast. Flush the mouth, throat, and stomach, washing out the poison which remains from yesterday and get the system ready for the new food of the new day.

Air the Bedding—Form the habit of throwing the bed clothes down over the foot of the bed, and with windows open, let them air several hours before the bed is made. Through the hours of the night the skin has been casting off poison, and the bed coverings are saturated with it, therefore they should be thoroughly aired every morning in order to keep them sweet, fresh, and sanitary. A habit of this kind can be quickly and easily formed, and can be acquired by children as well as by adults.

Eight Hours Sleep Usually Required.

Eight hours of sleep is the amount needed by most people in order to keep the body in proper condition. People of nervous temperament who work under tension a large part of the time often require nine hours.

After the organs have worked a certain number of hours the blood becomes so clogged with waste that no further good work can be done until some of the poison is cast off and fresh oxygen is substituted. When the system reaches this stage Nature sends out a danger signal in the form of fatigue. This is really the chief cause for sleep. The blood is then sent to the trunk and the various organs take up the work of casting off the poison and supplying the blood with oxygen and new life.

When your furnace fire becomes smothered by an accumulation of ashes and cinders, it burns low until the grate is dumped and the air allowed to enter, then it burns brightly again. A similar action takes place in our bodies during sleep. This is the reason that we should have fresh air to breathe during the night, and it is necessary to lie in a relaxed position so that the blood can circulate freely.

It has been demonstrated that this process requires from six to eight hours. Many young people foolishly pride themselves on being able to get along with four or five hours sleep and argue that that amount is entirely sufficient. When a person is young and full of vigor the body can stand abuse far better than it can in later life, and the effects are not so apparent, but vitality is being sapped nevertheless and there is likely to be a reckoning day later on. Nature is entirely just and fair, but relentless, and when dealing with her we reap what we sow.

Beauty Sleep.

Sleep which comes in the early hours of the night is usually more refreshing than that which comes toward the break of day. The reason for this is quite apparent, for toward morning the day noises begin to play upon the auditory nerves, and light effects the optic nerves, both of which excites and disturbs the brain, often causing dreams and broken rest.

INDIGESTION

CHAPTER XI.

Some Bad Habits In Regard to Food.

"Pay more attention to ingestion as well as digestion and thereby avoid much indigestion."

Indigestion is nature's gentle hint that the food we have eaten is not what is needed; it is the stomach trying to send out a danger signal to warn us of our mistakes, and start us along the correct road.

Food Should not be Excessive in Quantity—One noted physician says, "One fourth of what we eat keeps us, the other three fourths we keep at the risk of our lives."

We hear much about intemperance in drinking, but very little about intemperance in eating, and yet there is really very little difference as far as the individual himself is concerned, except in popular opinion. Gluttony is a sin which must be answered for by sickness and suffering.

Educated, cultured people are beginning to appreciate the fact that a trained and controlled appetite is a mark of culture and just as essential as a trained mind when it comes to progress and general efficiency.

The amount of food required is measured by the physical activity. The man who does vigorous, muscular work in the open air needs, and can take care of more food than the one who does mental work in doors. A large amount of food and little exercise is certain to make the mind and faculties dull and sluggish, instead of alert and active.

Food Should be Thoroughly Masticated—If the mouth does its work well, the stomach is saved from many extra burdens. The food is supposed to be ground by the teeth, moistened by the saliva and thoroughly prepared for swallowing. The mouth is the only digestive organ provided with teeth, and therefore the only one designed for this grinding process. If the mouth shirks, the stomach has to come to the rescue and attempt the extra work when it already has plenty of its own.

Children should be taught to eat slowly and chew the food well, for it is a matter of habit, and as any other habit, it is a difficult one to break when once the wrong one is formed.

A Person Should Not Eat When Very Tired—Many severe cases of indigestion are caused by eating heartily when one is worn out physically. Digestion is a muscular process and when the body is very tired, the stomach is tired, and in no condition to care for food. Usually, under these conditions, there is no appetite, yet few people realize that the lack of appetite is a signal sent out by Nature as a warning that no food is required at that time. How often we force ourselves to eat "just a little to stay the stomach" and how often we urge those about us to eat something "just a little toast or something" when they are indisposed and have no desire for food. Nature is far more capable of caring for us than we are of looking after ourselves and we would be much farther along on the road to Health if we would trust to her guidance more and to our own foolish fancies less.

The Mental State Affects Digestion—Worry, excitement, fear or grief quickly affects the digestive process. When food is eaten the blood is sent to the digestive organs to manufacture digestive juices and help those organs perform their work. Worry or any wrong mental state draws the blood up to the brain and interferes with digestion. Prof. Cannon of Harvard University demonstrated this with his experiments on cats. He fed the cats food mixed with bismuth powder which turned the food black and then by means of X-Rays he watched these organs at their work. He found that as long as he petted the cats and kept them purring and happy, the process of digestion went on, but as soon as he began pulling their tails and annoying them, just that soon the movements of these organs ceased and digestion stopped.

Professor Parlow, a Russian, tried similar experiments with dogs. In one room he kept several dogs confined, and in a small iron cage in the center of the room one dog was kept a prisoner. These dogs ate the same food, breathed the same air and lived under the same conditions, except that the one in the cage was discontented, struggling constantly to get free, while the others romped and played at will. This experiment was tried many times and each time the imprisoned one developed some malady while the others remained healthy and vigorous. This simply proves that the body is quickly affected by the mental state.

You may go to the table ravenously hungry after hours of exercise in the open air, find just the food that appeals to you, start eating it with a relish, then let a telegram be handed to you containing bad news

and instantly all desire for food leaves you. What has happened? Simply this, while you are hungry and the mind is in a calm, happy state, the blood is about the organs of digestion getting ready to take care of the food you are about to eat, then comes the mental shock and the blood is switched off to the brain. This leaves the digestive organs in no condition to care for the food so Nature very kindly withdraws the appetite. If you are wise you will let Nature have her way in a case of this kind, for many serious consequences have followed enforced feeding when appetite has flown.

Children should not be scolded at meal time. If they are to be corrected, some other time should be chosen, because just as soon as you begin to trouble their little brains, just that soon the blood is switched off from the digestive organs, and the food eaten will not be properly cared for.

The meal hour should be one of the happiest events of the day. If you have funny stories, and happy things to relate, tell them when you are gathered around the family board. Never allow the dining table to be the place where you talk shop or discuss unpleasant family problems, for as has been shown, the mental state plays an important part in the workings of this bodily machine, and you can control it to a large extent if you choose.

Food Should Not Be Taken At Too Frequent Intervals—The habit of eating between meals is a very injurious one and once formed is a difficult one to break.

The regular three meals which most people eat, coming as close together as they do, often give the

stomach more work than it can attend to, for it takes the average meal five or six hours to digest and leave the stomach empty. Common sense, even if we have no knowledge of physiology tells us that the stomach should have some time for rest in the course of the day. Now if we add to the three meals, lunches of fruit, popcorn, candy or cracker-jack, it isn't difficult to understand that we are putting a burden on the digestive organs which is more than the average system can bear indefinitely.

The American idea of a celebration seems to be to stuff the body with all kinds of eatables. New Years, Christmas, Thanksgiving, what do we do? Usually we invite in our best friends, gather them around a table which fairly groans with rich, tempting food, and then we eat and eat. One course follows another until we can eat no more, and then we feel dull and sluggish for days while the eliminating organs struggle with the surplus waste, and make a strenuous effort to cast off the poison and keep us from an attack of illness. I sometimes wonder if this is the proper way to worship our Creator, by abusing our bodily temples and breaking the laws of temperance and moderation which He has laid down for us to follow.

Go to one of our summer resorts and note how people spend their vacations. You will find a refreshment stand at almost every turn of the way, and nearly every person you meet, be it forenoon, afternoon or evening, is eating something from a paper bag. Away from the regular daily routine, with nothing to occupy their minds or fill the vacant moments, a desire for

food seems to manifest itself, especially when there is a temptation on every side. So they yield whenever the lull comes, and finally the habit grows into a diseased hunger over which they have no control. After eating your regular meals try forming the habit of cleaning the teeth and then resolve that you will put nothing, except water, into the stomach until the next meal hour arrives. Even though it be a sacrifice at first, it will prove to be worth the effort, for the complexion will clear out, the general health will respond and you will feel like a new person.

In many towns even the Women's Literary Study Clubs, supposedly organized for the intellectual uplift of the members, feel that they cannot meet without refreshments being served. True, the idea at the organization is usually simple, light refreshments for sociability sake, but how long does it take for the idea to develop into a two or three course dinner? Each hostess feels that she must have everything just as nice, and if possible, just a little nicer than the one who preceded her, and so she adds a little surprise or two. So it goes until nothing short of a banquet is acceptable. How much intellectual inspiration does the hostess get out of such an occasion? Unless she has servants to do the work, she gets nothing but a tired, nervous, physical condition from which she requires a week or more to recuperate.

One of the large problems which confront our colleges today is the "spread" habit. Many of our college girls are almost living on indigestible concoctions made in the chafing dish, or sweets obtained from ice cream parlors or delicatessen shops. They eat

these things during the vacant periods, and then when regular meal time arrives they have no appetite for wholesome food.

It is a deplorable fact that young women are going out from our American colleges every year broken in health, many of them almost nervous wrecks. Overstudy is frequently named as the cause, when in the majority of cases it is irregular eating and indigestible food that is responsible.

Having spent eight years as a teacher, living all of that time in college dormitories in close touch with the young women, I am convinced that the condition is a serious one, and one which our colleges must face if the health of the students is brought and kept up to the standard.

"Let us strive to put down these mere animal propensities in us and begin to strive for higher things. Let us work for clean healthy bodies, which are the instruments, the temples of our minds and souls, rather than for mere tenements in which blind forces may riot and leave in their trail, maladies and misery."

Below is a short clipping which has been helpful to many people, so I am putting it in these pages with the hope that it may cause others to have more respect for their stomachs and lighten their burdens by temperate eating.

Leaves From a Diary of a Girl's Stomach.

10 a. m.—Oh, dear; Another warm day. Wonder if I'll be abused as I was yesterday. If I am, I'm going to strike. Just disposed of a half-chewed breakfast. We ran for the train, which meant I was so jiggled about and so tired that it took me twice as long to do my work. Hope she gives me another hour or two of complete rest before anything comes my way.

10:30 a. m.—Two glasses of ice water have just arrived. It will take all the energy I can pump up in the next hour to warm me up to normal again.

10:50 a. m.—Half-chewed breakfast did not satisfy her and she bought some peanuts and started eating them.

12 m.—Peanuts have dribbled along steadily ever since last entry. Think she has finished them, though.

12:30 p. m.—Decided she wasn't hungry, and instead of a good solid dinner sent me down a cold egg-nog, heavy with chocolate. Could have managed it all right if it hadn't been so cold, but that makes it terribly hard to deal with.

1:10 p. m.—More ice water.

1:40 p. m.—Was mistaken about the peanuts. She found another handful in the bottom of the bag and now I have to tend to them.

2:05 p. m.—More ice water.

3:10 p. m.—She has been lifting some heavy books, and, as usual, used my muscles instead of her arm muscles, as she should have done. Tired me more than digesting a six-course dinner.

3:20 p. m.—Someone has brought us a box of caramels, and she has started on that.

4:30 p. m.—Have received something like a pound of caramels since last entry. She just said, "Oh, dear, I don't feel a bit well. I know the milk in that eggnog must have been sour."

6:30 p. m.—We played a set of tennis before dinner, and here I am all tired out and a dinner to handle.

6:50 p. m.—We were invited out to have a soda before going home. Had a lemon phosphate and then ran for the train.

7:00 p. m.—Fried potatoes, veal, cucumbers and canned blueberries. What do you know about that?

7:45 p. m.—We are going down for a chocolate walnut college ice.

8:20 p. m.—Got home and found someone had made some lemonade. She drank two glasses. That on top of a college ice settles it. I strike!

8:30 p. m.—Have sent back the college ice and lemonade.

8:40 p. m.—Returned the blueberries.

8:50 p. m.—And the veal.

9:10 p. m.—She has sent for the doctor. She says that college ice must have something the matter with it. Her mother says it is probably the weak stomach she inherited from her father.

9:30 p. m.—Doctor says it is just a little upset, due to the weather. Good night.

Parents' Responsibility.

Parents have a big responsibility in training the



FIGURE XI



FIGURE XII.

eating habits of their children. Children should not be allowed to cultivate habits of gluttony or grow up to maturity without being able to distinguish between true hunger and false appetite. True hunger is in the mouth, a watering at the mouth, a feeling that food is going to taste good; false appetite is a gnawing, burning "all gone" sensation in the stomach. The latter condition indicates an inflamed mucous membrane, and it is better to go without food for a few days, and let Nature restore the membrane to a healthy state. In the meantime drink freely of water. Often diluted lemon juice, orange or grapefruit juice hastens recovery.

The difficulty is, our appetites become so perverted from wrong living that they are not always a safe guide. This emphasizes the importance of proper habits being formed in childhood.

A Boy's Stomach.

What's the matter with you, ain't I always been your friend? Ain't I been a partner to you, all my pennies don't I spend In getting nice things for you? Don't I give you lots of cake? Say stummick, what's the matter that you have to go and ache?

Why, I loaded you with good things yesterday, I gave you more

Potatoes, squash an' turkey than you'd ever had before, I gave you nuts and candy, pumpkin pie and chocolate cake, An last night when I go'd to bed you had to go and ache.

Say what's the matter with you, ain't you satisfied at all?

I gave you all you wanted, and you was hard just like a ball, An' you couldn't hold another bit of puddin', yet last night You ached mos' awful, stummick, that ain't treatin' me just right.

I've been a friend to you, I have, why ain't you a friend o' mine?

They gave me castor oil last night because you made me whine.

I'm awful sick this morning, an' I'm feeling mighty blue, Becoz you don't appreciate the things that I do for you.

Eating on Trains.—While riding on poorly ventilated trains and without exercise, we cannot take care of as much food as we can under ordinary conditions. It is well to substitute for meats and rich, heavy foods, at least a partial diet of fruits or nuts. Dates, raisins, figs and nut meats can be easily carried in your traveling bag and fresh fruit can often be obtained along the way. A diet of this kind has a large amount of food value and does not overtax the digestive and eliminating organs.

If lunch counters must be patronized, instead of eating hurriedly, with one eye on the clock and your nervous system keyed up to a high pitch over the possibility of missing the train, it is better to choose a few things that can be taken to the coach and eaten leisurely.

Violent Exercise Should Not be Taken Near the Meal Hour—Violent exercise should not be taken within a half hour before, or an hour after eating a hearty meal. Vigorous exercise before the meal leaves the body tired and keeps the blood in the extremities when the digestive organs need it. Exercise immediately after the meal draws the blood away from these organs and interferes with the work of digestion.

It would be a splendid thing if housekeepers would get into the habit of relaxing a short time after the meal, letting the process of digestion get well started, before rushing about clearing the table and washing dishes. Again you may think I am advocating habits of laziness, but do not let that idea trouble you if better health and efficiency result from the practice.

COLDS

CHAPTER XII.

An ordinary cold is the effort of the system to throw off poison which has not been cared for by the eliminating organs. It indicates a clogged system and it is one of Nature's most ordinary methods of cleansing the body and freeing it from harmful waste. When the system gets in this clogged condition, a cold, instead of being looked upon as a calamity, should be considered a blessing, for when the blood is loaded with poison, Nature must find some outlet, and if relief is not given by means of a cold, the poison may be thrown off in some more serious form later on.

Causes of the Ordinary Cold.

Overeating—Overeating is perhaps responsible for more colds than any other one thing. More food is taken than can be cared for by the digestive organs and this great accumulation of waste is often more than the eliminating organs can manage. Thus the system becomes clogged, every vital function is impaired and Nature comes to the rescue and has a general housecleaning in the form of a cold.

Overfatigue.—A cold often comes when the strength has been overtaxed, because at such a time vitality is lowered and the person is lacking in resistance power. If a little extra sleep can be obtained when the first symptoms are noticed, the cold can often be broken up. This gives the organs a chance to

get caught up with their work, the nervous system gets a little rest, and the body is often enabled to throw off the poison and accumulate enough resistance power to ward off the cold.

Catching Cold from Exposure or a Draft—Catching cold from exposure or draft may frequently be the occasion of a cold but it can hardly be considered the cause. When a cold wind strikes a person causing a chill, the blood is sent at once from the surface of the body and congested about the organs of the trunk. Their work is hindered, if not entirely stopped for the time being, and every effort of the body is being exerted toward maintaining the normal heat, digestion and elimination are both affected, and the result is likely to be an accumulation of waste matter. Now if the body is in good condition before this takes place, it may rally as soon as warmth is restored and no harm be done, but if it is already clogged, it takes longer for the organs to recover from the shock, this added amount of poison is often more than the system can manage, and relief must come from some source, and the most ordinary source is a cold.

Treatment for a Cold.

A Short Fast—Eat very little or nothing at all for a few days and give the system a chance to throw off the poison. This suggestion usually calls to mind the old saying, "Stuff a cold and starve a fever." The modern interpretation of that is, "Stuff a cold and you will have a fever to starve." If a complete fast seems impractical, food should be chosen which will tax the digestive and eliminating organs as little as possible.

Rich, heavy food should be avoided by all means. Fresh fruits and fruit juices are the best, for they provide nourishment and require very little attention from the organs of digestion. Soups, if properly made, are good also.

Aid the lungs by Deep Breathing.—Give the lungs a chance to throw off their share of the poison. If the patient is comparatively strong, a brisk walk will often break up a cold in its early stages. One should walk rapidly, and far enough to get up a free perspiration, breathing deeply all the time, thus aiding both the lungs and the skin in their work of elimination.

There should be plenty of fresh air in the home and especially in the sleeping room. This old idea of remaining shut up in a hot, poorly ventilated house when we have a cold, is fast giving place to more sensible, natural methods. If ever the lungs need fresh air it is when the system is trying to clean house.

Aid the Kidneys by Water Drinking.—Eat little and drink much when you have a cold, flush the kidneys and help them to cast off poison. The regular two quarts should be increased to three or four while the cold lasts.

Aid the Skin by Sweat Baths.—A good sweat bath is a wonderful help in freeing the system from poison. If you cannot have a Turkish bath, there are several ways by which a sweat bath may be taken in the home. Get into a tub of water, as hot as can be comfortably borne, then throw a blanket over the tub and remain until you are perspiring freely. It is a good plan to drink a glass or two of cold water before getting into

the tub, and there should always be a cold compress on the forehead and one at the base of the brain, to prevent the blood from rushing to the head.

The sweat bath should be followed by a cold sponge or shower, in order to keep from catching more cold after it is over.

Keep the Bowels Active—When the first symptoms of a cold are noticed, the intestinal canal should be relieved of its load of poisonous waste, either by means of a cathartic or an enema or possibly by the use of both. It is well to take a good dose of salts the first day and then use the high enema every day afterward until the cold has disappeared. Suggestions in regard to the internal bath are given in the chapter on "Constipation."

The Cold Compress—Few people realize the value of the cold compress in the treatment of colds, and many who have given it a trial have not applied it correctly and have not been benefited as they should have been. To prepare a compress for a cold in the head, first, wring a Turkish toweling wash cloth out of ice water and place it upon the forehead, then place over this a piece of oil silk or mackintosh cloth, large enough to entirely cover it, and bind the two on with a woolen cloth and leave it during the night. The oil silk is inexpensive and can be obtained at any drug store. The object of its use is to keep the outside woolen cloth perfectly dry and to prevent the cold air from reaching the compress. If the cold has settled in the throat or on the lungs, follow the same directions, but two wash cloths will be required for the throat, and if preparing a compress for the lungs,

a Turkish towel will be none too large. The above directions were once given to a lady having a severe cold. She followed the suggestions with the exception of the use of the oil silk and the woolen cloth. It was a cold winter night, and she was sleeping near an open window. Toward morning she awakened and found both the compress and the towel with which she had bound it on, frozen stiff. The towel had become wet from contact with the wet washcloth, and the room was cold, so it was an easy matter for it to freeze. The result was a much harder cold of course. She had been told about the oil silk, but had not considered it of enough importance to make an effort to secure it, neither had she realized the value of the woolen cloth, which is designed to keep the bodily heat in, and the outside cold air from reaching the compress.

How to Harden the System Against Colds.

Use of an Atomizer.—I believe every one should spray the nose and throat frequently by means of an atomizer and some good antiseptic. This is rather a prevention of colds than a cure. Of course the use of some good spray helps to heal the mucous membrane and reduce the inflammation, but it will not stop the cold as long as there is waste matter to be thrown off. Nevertheless its frequent use helps tone up the membrane, keeping it healthy and giving it resistance power. For the nose a weak solution of salt water makes an excellent spray. It should be followed, however, with some oily spray for the salt water leaves the membrane rather dry and parched. Liquid vaseline or any oily preparation provided by the druggist will moisten the membrane and leave it in good condition.

Fresh milk is excellent for this purpose. This can best be applied by means of the nasal douche. There are various preparations used for the mouth wash such as listerine, peroxide, etc., but the one most highly recommended by several physicians is extract of cinnamon. Care should be taken not to get this mixture too strong, but a few drops to a half a glass of water is sufficient. It should never leave a burning, stinging sensation in the mouth, if it does it is injurious and more water should be added. If extract of cinnamon cannot be obtained, any druggist can fix a mixture of oil of cinnamon and alcohol which will answer just as well. This is an excellent disinfectant and leaves a very pleasant taste in the mouth.

The Cold Sponge or Air Bath—The cold sponge bath in the morning does much toward giving the skin resistance power and hardening a person against colds. If the cold water bath is too severe a measure the cold air bath should be substituted, but even with the air bath people subject to frequent colds will find that cold water dashed over the throat and lungs every morning, will stimulate the skin and give it resistance power.

Plenty of Fresh Air in the Sleeping Room—Breathing fresh night air instead of being a risk, liable to cause colds, it is one of the greatest preventatives known. Fresh air from outside, though it be cold and damp, is far more beneficial than warm, stale air, and not nearly so likely to produce a cold.

PHYSICAL EDUCATION

CHAPTER XIII.

A Few Suggestions to Teachers.

What to Work for in Each Class Period.—

1. Exercises for muscular development, striving to reach each set of muscles. (This work can be found in the chapter, "Exercises For Muscular Development.")
2. Exercises for muscular control, working to get the mind in the ascendancy and the muscular system in subjection to it. (This can be accomplished by military drills, and sharp order work, or anything which brings the mind into play and makes the pupil think and act quickly.)
3. Exercises for muscular relaxation, teaching pupils to let go of tension. (Relaxation work can be found in the chapter on Nervousness.)
4. Exercises for replacing displaced organs, aiming to lift the organs into their proper position in the trunk and strengthening the ligaments so that the organs will be held in place. (Stretching exercises in the chapter on Poise are designed for this work.)
5. Exercises to aid the digestive and eliminating organs in their work. (The special exercises in the chapter on "The Liver," both the liver squeezers and the movements for flexibility are splendid for this purpose.)
6. Instructions in correct breathing. (There are many excellent breathing exercises given in the chapter on "Breathing.")
7. Work for poise and grace. (The exercises for poise in the chapter on "Poise" and the walking drill in the chapter on "Walking" are especially adapted for this purpose.)

With careful planning, work for all the above purposes can be put in a fifty minute period, and this should be done if all round development is to be ob-

tained. For work in the rural schools or in the grades where but a few minutes can be devoted to this work each day, it would be well to use one exercise from each group, changing the movements from day to day for the sake of variety.

Qualifications of a Good Physical Director.

1. To be a successful instructor of physical training you must believe what you are teaching.

2. You must be familiar with the anatomy of the body and understand the exact effect of each exercise given.

3. You must practice what you preach. Your pupils will watch you, and if you tell them one thing and do the opposite yourself, your influence will count for very little.

4. You must have a good idea of time and have good music to work with. Be sure your music fits your drill.

5. You must have a good voice and know how to use it. Every order should be short and concise and given in a clear, distinct utterance so that it can be easily heard and understood in every part of the room.

6. You must be a good disciplinarian. Never allow whispering or laughing during the class period. Every student should be working in unison with every other student, and this is impossible unless you have their attention and there is perfect order in the class. The mental training in gymnastics is just as important as the physical. Discipline in any kind of teaching depends largely on the teacher's ability to govern herself. If she has perfect self control she is likely to have no trouble controlling her pupils, but if she loses control of herself she loses the respect of the pupils at the same time and then trouble is likely to follow.

7. Give a variety of exercises, every day.

1. For the sake of keeping up the interest.

2. For the all around development of the pupils. Always have something new each lesson; try to keep the pupils in a state of expectancy.

8. You must put enthusiasm into your work if you expect an enthusiastic response.

9. Never let things lag. When you get a class on the floor keep them doing **something** every minute until the end of the period. It may be relaxing, games, etc., but always have work well planned. Do not keep a class waiting while you are getting your ideas formulated; learn to think on your feet.

10. There are two kinds of gymnastics.

1. For recreation and fun.

2. For health, grace and general development. There should be some of the former combined with much of the latter each period.

11. You must know how to give commands. Make orders brief, concise and emphatic. Many teachers talk too much while directing a class. The use of the upward inflection is usually the most effective and a pause between the qualifying word and the order itself is helpful, thus—

Forward—March

Backward—March

The words forward and backward mean think, the pause indicated by the dash gives them time to think, and the word **march** means execute the order.

12. In demonstration work, when facing a class, always use your left arm when ordering pupils to use their right. This prevents confusion and keeps the entire class working together.

13. Explain exercises to mature pupils; let them know what portion of the body is being affected, for this helps to stimulate their interest.

14. Never tire pupils with exercises; just short of fatigue is the rule for physical work.

Always have good ventilation while pupils are exercising. Care should be taken, however, to avoid a draft while pupils are at rest, and especially while they are relaxing on the floor at the end of the period. When the work has to be given in the class room the windows should be thrown open and the pupils given some vigorous exercises accompanied by deep breathing. This ventilates the room and at the same time refreshes the pupils, then close the windows and devote a few minutes to the rest work.

With a fifty minute period, at least twenty minutes should be devoted to relaxation; ten minutes, perhaps, of loose, free movements in standing position toward the middle of the period; and ten minutes of complete rest in reclining position just before dismissing the class. Never send pupils from the class tired and perspiring. These few minutes of complete rest help to drive away weariness, and it gives them a chance to cool off gradually before leaving the room.

In the rural schools or in the grades the relaxation work has an important place. Each teacher must use her good judgment, of course, in regard to when it is most needed, and how much time can be devoted to the work, but on general principles, gymnastics and especially the relaxing exercises are most appropriate when the pupils begin to get tired and restless. The deep breathing and the free movements equalize and stimulate the circulation, soothe the tired nerves and leave the pupils refreshed and better prepared for mental work.

HOW AND WHEN TO EXERCISE

CHAPTER XIV.

How—Rapid movements waste flesh, slow movements make flesh. Many times this little key to physical exercise is omitted and people practice the exercises faithfully but incorrectly and fail to obtain the desired results. If you are above normal in weight and are working to reduce, practice the bending and twisting exercises rapidly. If you are thin and working for development, do the exercises slowly. Physical exercise, if practiced correctly, is supposed to bring about a normal condition.

If you adopt a system of exercise, remember that it is regular, systematic practice that counts. A few minutes every day will mean far more than a longer practice at irregular times.

Never strain in physical work and do not practice until exhausted. Just short of tired, is a safe rule to go by.

Always work in loose clothing so that there will be perfect freedom of movement.

When.—The time chosen for daily practice depends somewhat on your conditions of living. Often a person has to choose the most convenient time regardless of directions, but, as a general rule, it seems that the vigorous, waking up, deep breathing exercises should properly come in the morning in order to get the blood to circulating freely and tone you up for

the day's work. Then, after a day of labor and tension, the loosening up, relaxing movements fit in well at night. They relax tired muscles, gently equalize the circulation, thus relieving the brain from congestion and quieting you down for a night of rest.

The amount of time devoted to daily practice depends, largely on the amount of exercise you get in your regular routine. If you are willing to give but ten minutes in the morning and ten minutes at night to the practice you will find that it will work wonders for your general health. The more time you give to it, the more rapid and satisfactory the results will be of course.

EXERCISES FOR MUSCULAR DEVELOPMENT

CHAPTER XV.

Muscles of the Arms and Legs.

1. Stand, clench fists and place them on chest, then do the following movements.

- a. Right arm forcibly out at right, 4 times.
Left arm forcibly out at left, 4 times.
Alternate right and left, 4 times.
Both arms, 4 times.
- b. Same as (a) thrusting arms forward 4 times.
- c. Same as (a) thrusting arms upward 4 times.
- d. Same as (a) thrusting arms downward 4 times.

2. Clench fists and place them under the arms.

- a. Same as (a) in No. 1, 4 times
- b. Same as (b) in No. 1, 4 times.
- c. Same as (d) in No. 1, 4 times.

3. Same as Nos. 1 and 2, combining a foot movement. As the right arm goes out toward right, tense the muscles of the right leg and touch right foot out to the floor on right side; then the left foot out to the left side as the left arm goes out toward left, then alternate the movement, and as both arms go out at side, rise to tiptoes. This combination gives variety and reaches both arm and leg muscles at the same time.

4. Bicycle Movement—Imagine you have your feet on the pedals of a bicycle, then start running it, using

force enough to keep the bicycle going. Then draw on your imagination still further and imagine that there is a bicycle suspended above your head, and that it is upside down. Now place your hands on the pedals and start pumping it with the hands. Remember that the bicycle pedals go around in a circle so the arms must make a circular motion, pumping directly upward as pedals go around.

Then combine the arm and foot motion keeping both bicycles going at the same time. This is a wonderful exercise for muscular development but it is rather strenuous and should not be practiced long at a time.

5. Place right foot out at right diagonal, bend forward toward right diagonal, grasp an imaginary pulley in each hand, and come slowly up to erect position, pulling steadily until hands reach the chest, then relax and let hands drop limply at sides. Same on left side.

For Muscles of the Abdomen and Back.

1. Lying flat on the back, draw feet along on the floor up toward the body, with knees bent and raised. The feet should rest flat on the floor and almost touching the body. Now slowly and carefully raise the hips up from the floor, supporting the trunk with the muscles of the feet and shoulders. Raise hips as high as possible without a strain, then just as slowly and carefully let the hips sink back to place, never come back with a jerk. You may not be able to lift the hips but a few inches at first, but as you practice



MEMBERS OF THE ROCKY MOUNTAIN CLIMBERS' CLUB AT THE
CAMEL BACK, BOULDER, COLORADO, CHAUTAUQUA.



CAMP SCENE TAKEN AT THE COLUMBUS, INDIANA,
CHAUTAUQUA.



LADIES' REST TENT, ROCKVILLE, INDIANA, CHAUTAUQUA.

SCARF FANTASTICS



FIGURE XIII.

Two positions from the drill "Scarf Fantastics," by Elizabeth Middleton. Special Drills for Exhibition Purposes. This is a very artistic drill when given with three different groups posing at once and each group dressed in different colors (pink, blue, and lavender, or any other colors which harmonize). Scarfs should match the gowns of each group. The Scarf Fantastic illustrated above is a copyright drill so directions cannot be given; but the right may be obtained from Edgar S. Werner and Company, 43 East 19th St., New York City.



FIGURE XIV.

the exercise it will gradually become easier, and you will soon get the muscles under control.

2. Lie flat on the back, take in a full breath, and force it all down into the abdomen, at the same time contracting the muscles of the chest, then, still holding the breath, draw the muscles of the abdomen in, forcing the breath up into the chest; again, force the same breath back into the abdomen, then back up into the chest, then relax.

This exercise is one of the most valuable ones I have ever found for the muscles of the abdomen and back and for the pelvic organs. Those muscles and organs are often weak and diseased because of poor circulation and bad blood. This forces good blood down into the abdomen thus massaging them and providing them with nourishment.

3. Stand, bend forward and place both hands on the floor in front of the feet, then lift the right hand and place it on the floor about a foot in advance of its original position, then advance the same distance with the left hand, then advance with right, etc., climbing out until the entire length of the body is supported by the hands and the feet. Don't allow knees to touch floor. Hold the position a few seconds then climb back, using first one hand then the other, until they get back to the feet, then come up to erect position.

4. Stand, feet together, stretch arms above the head, clasp hands and pull firmly upward first toward right side, then toward left. Be careful not to strain either back or abdominal muscles.

5. Stand, feet together, bend forward stretching arms out in front of body, then stretch both arms firmly toward the right side, then toward the left. There should be a good, even pull on the muscles of the back, but no strain.

6. Lying flat on the back, bend right knee, clasp hands under the right foot, inhale, then pull until knee touches chest, then push down with the leg pulling firmly on the muscles of the shoulders and back. Pull and push several times, then relax. Same with left foot.

GAMES

CHAPTER XVI.

For the Playground and Gymnasium.

The value of gymnastic games and organized play is coming to be appreciated more and more each year. We know now that much of the corrective and remedial work formerly done in the gymnasium can be done by properly directed games on the play ground. The play instinct is strongly developed among children, all that is needed is for it to be directed along the proper channels.

There is a large place for this in the regular gymnasium work, but it is in the grades and especially in the rural schools where its influence is to be most felt. Under present conditions in the rural schools, until consolidation becomes universal, I believe the problem of physical development must be solved by means of games and organized play, for with the limited time, and the multiplicity of subjects already required, it seems impractical to urge the teachers to devote much time to physical exercise.

Below are given a list of carefully planned games which may be used during the periods of recreation. It will be necessary for these to begin under the direction of the teacher, but there are usually, in most schools, older pupils who can be relied upon to take

the responsibility of directing them, at least part of the time after they have been carefully worked out.

The aim is to combine stretching, bending and twisting movements with work for muscular development, and fair play, so that the children will get all around development both physical and moral.

Over and Under.

Over.—Have the pupils form in two or three rows according to the number playing, have them face the front, place a bean bag or a dumb bell in the hands of the leader (No. 1) of each row. Then, No. 1 takes it in both hands and passes it backward over his head to No. 2, who, in turn, passes it on to No. 3, etc. The article must be touched by both hands in passing, and must go directly over the head. When it reaches the last one in the line he must run to the head of his line and begin passing it backward in the same manner. The object is to see which line will be the first to get their leader (No. 1) to the rear of the line and back to the head again.

This contest is always a popular one, and it is beneficial because of the upward stretching work and because it makes the players think and act simultaneously.

Under.—This is conducted in the same manner, except that the lines stand with feet apart, then stoop forward and pass the article between the legs.

Here they get a bending instead of a stretching movement.

Wood Tag.

In this game there should be some small blocks of wood (just large enough to be easily seen in the grass) distributed about the yard where the game is to take place. There should be as many blocks as there are players, then one player is chosen as "It." The rest of the players choose a place where they can touch a block of wood with their foot, then the one chosen as "It" calls "Change" and every player must change to another place. While the change is taking place "It" tries to touch some one before he can reach another piece of wood and the one caught becomes "It."

Stone.

Two goals are marked off some distance apart and a large base marked midway between the two. One player chosen as "Stone" lies down on the base and the other players, who have been stationed half at one goal and half at the other, advance toward the center and dance around stone. Suddenly Stone jumps up and all flee for goal. As many as Stone touches off goal become Stones. Then the first Stone becomes captain and those caught become his assistants. They all lie down on base until the captain calls "Up" then they jump up and chase the others toward goal. This continues until all become Stones.

Straddle Ball.

Form a circle, feet apart, touching feet of neighbor on either side. One player in the center tries to throw a basket ball between the feet of the players, or between two players. Those in the circle strive to bat it back with the hands but the feet must remain stationary. Player whose feet it went between or to whose right it passed, must take place of the center one.

The bending and twisting as players strive to ward off the ball, as well as the muscular work necessary makes this an excellent game from a health standpoint.

Straddle Pin Ball.

This game cannot be played unless Indian clubs are available, but if the teacher can have Indian clubs, it makes a very attractive game.

Players form a circle, standing with feet apart and an Indian club standing upright between the feet. One player in the center strives to knock the clubs down by tossing basket ball against them, while each player tries to protect his own club by warding the ball off with the hands. The player whose club is knocked over must change places with the one in the center.

This game is similar in its effects to Straddle Ball, but the use of the Indian clubs make it a little more interesting.

Kick Ball.

Players form two lines about four feet apart, sitting on the ground facing each other, then they rest their weight on the hands which are placed on the ground behind. The teacher then tosses a basket ball along between the lines and the players try to kick it over their opponents heads. When the ball is kicked over, one point is counted for the side making the score.

Wall Kick Ball.

Players form in two lines at the side of the school building, sitting on the ground facing each other, resting the weight on the hands placed back on the ground. The umpire tosses the ball down between the lines and the players try to kick it over their opponent's heads. When the ball is kicked over, the player next to the building on the successful side, runs and gets the ball and takes her place in her line on the umpire end. The player on the losing side who sat opposite her runs at the same time, touches the umpire and takes her place in her line on the umpire's end. The player in place first wins a point for her side. Continue until all have had a chance to run.

These last two games bring into play every muscle in the body and call for mental concentration as well.

Three Deep.

Players form in two circles, an equal number of players in each, those in inside circle standing directly in front of those in outside circle. Two players are chosen, one to be "It" and one to be "Catcher." "It" runs and takes a position in front of some one in the inside circle, this makes the players **three deep** which is not allowable, so the third one must run and take a position in front of someone in the inside circle, again causing the line to be **three deep**. The third one is always in danger of being caught until he is stationed in front of some one in the inside circle, so this necessitates constant changing, and the "Catcher" is always busy trying to touch No. 3 while he is looking for a place. No. 3 upon being caught becomes "Catcher" and the former "Catcher" runs for a place.

I know of no game that furnishes better mental gymnastics than this, the players must be on the alert every second, and the constant shifting from place to place gives plenty of muscular exercise as well.

Line Tag.

From three lines facing front, join hands thus forming two aisles. No. 1 on first line runs and tags some one on the back No. 6 for example. No. 6 then runs after No. 1 through aisles and around the classes never passing under the joined hands. Suddenly the order—"right face"—is given, and players drop hands, right face and join hands again forming aisles, so runners must change their course accordingly. The teacher should give the order suddenly. When No. 6 has tagged No. 1 two others take their places.

Bean Bag Contest.

Players from two lines facing each other and several feet apart. A pile of bean bags, six to ten in number are placed on the ground at the head of each line. At a given order No. 1 of each line picks up one bag with the hand nearest, touches it to the ground, takes it in the other hand and passes it to No. 2. No. 2 takes it in the first hand, touches it to the ground and passes it with the other hand to No. 3, etc. Each player should take the bag in one hand, touch bag to the ground and pass it with the other hand. In the excitement the players are apt to be careless about following the rules of the game but the teacher should insist on accuracy and fair play because this is one of the important elements in organized play.

Red and Black.

Two goals are marked off a good distance apart, and a dividing line midway between the two. Then the players are divided equally and one side named red and the other side black. The players stand back to back about three or four feet from the dividing line, then the teacher or umpire tosses up a bean bag which is red on one side and black on the other. If the red side comes up the umpire calls "Red" when the reds turn and chase the blacks, trying to touch them before they reach their goal and so put them out of the game. If the black side comes up, the blacks do the chasing. The chased that were not caught and the chasers form their lines again.

The side catching all of the opponents first wins.

Circle Around Clubs.

Here is a splendid game for gymnasium use. It couldn't well be played on the play ground unless it were very level so the clubs would stand on end.

Place from six to twelve Indian clubs on the floor in a circle about twelve inches apart. The players form in a circle, with clasped hands, around the clubs and pull each other around, each trying to make their neighbor knock a

club down. The players knocking clubs down have to drop out of the circle, and so on until but one remains, this one is winner. The object is to jump over the clubs or pull around them and stay in the circle as long as possible.

The Cat and Rat.

Choose one player for cat and one for rat. The others form a circle, with clasped hands leaving one gate only through which the cat can come and go at will, and the rat is favored by the players and allowed to go under the hands, but the cat is prevented from passing by stooping until their hands touch the floor.

The cat starts on the outside and the rat on the inside. When the rat is caught the cat joins the circle, while the rat becomes cat and chooses a new rat for the circle.

In this game almost all of the muscular system is reached and the free bending, and twisting together with the fun produced by the race makes it entirely worth while.

SPECIAL DRILLS FOR EXHIBITIONS

CHAPTER XVII.

Bean Bag Pile. (No. 1.)

Players form in two lines facing each other. At one end of each line are piled ten or twelve bean bags. At a given signal the first player in each line takes a bag and passes it down the line, sending the others in rapid succession. When the last player in each line receives the bag he lays it on the floor in front of him, and as each bag reaches him, he piles it on the first one making a stack. The first bag is the only one which touches the floor. The stack must stand without assistance and should the pile fall over, the player must pile them up again. The line first succeeding in getting all the bags stacked is the winner.

The last player, the one who stacked the bags, then carries them to the head of the line and becomes the passer for the next contest.

Bean Bag Contest. (No. 2.)

Players are divided into groups, and bean bags are placed in straight rows several feet apart, (five or six bags in each row and there should be as many rows as groups of players.) Each group forms in line at the head of their row of bags. A base should be marked out for each row, then at a signal No. 1 of each group runs forward, gets the first bag in his row and carries it back to his base, then runs forward for bag No. 2, places it on the base, etc. until all the bags are carried to base. Then No. 2 of each group takes a bag and runs forward and places it on the same spot where bag No. 1 had been, runs back and gets bag No. 2, placing it in its proper place in the row, etc., until all the bags are in place. No. 3 of each group carries them back to the base as No. 1 has done, No. 4 places them in order again, etc. The line first completing the task wins the contest. The exact position of each bag must be marked in some way before the contest begins.

Call Ball.

Players are scattered promiscuously over the playground or gymnasium. One player in the center tosses the ball in

the air and calls some one to run forward and catch it. If the one called succeeds in catching the ball before it bounds a second time he takes his place as tosser. Three failures puts a person out of the game. Much fun can be produced by the tosser calling players who are some distance away or taking them unawares.

Tree Ball. .

Each player, but one, chooses a tree or some object for goal and the odd player endeavors to tag one of the others by hitting them with a bean bag. The players try to prevent being tagged by jumping and dodging about. They are allowed to change goals frequently but must watch the tosser whose aim is not only to tag another player but to steal a goal and make some one else take his place as tosser.

Simon Says "Bend."

Players form a circle with the leader or teacher in the center. Teacher says "Simon says forward bend," or "Simon says right bend," etc., the teacher bending according to order and the players imitate the action. Then the teacher gives the order "Right bend," following the order as before but the players must bend only when **Simon** says to do so. The first one caught in the error takes the place of the center player and gives the orders. Much amusement and fun can be had from this game and the free bending exercise is very beneficial but should not be continued long at a time, for it is rather strenuous.

Japanese Crab Race.

Players are lined up behind a starting line, in from two to five single files each containing the same number. Opposite each file, at a distance of from twenty to thirty feet, there should be drawn a circle about three feet in diameter. At a signal the players of each line start running backward on all fours to the circle. The player who first reaches the circle scores one point for his team.

This game causes the greatest fun imaginable and brings the muscular system into active play.

Hopping Relay Race.

Players are divided into groups forming single files about ten feet distant from goal. The goal may be a wall or a line marked on the ground or floor. At a signal No. 1 of each line hops on one foot to the goal, touches it with his hand and hops back, touches No. 2 of his own line, then takes

his place at the real end of his line. No. 2 of each line hops forward, touches goal, returns in the same manner touching No. 3, etc. Each player takes his turn and the line whose last player first reaches the rear of his line wins the race.

Hound and Rabbit.

A number of players form in groups of three, facing each other with their hands on each others shoulders, each group making a circle which represents a tree. In each tree is stationed a player who represents a rabbit. Then there should be an extra rabbit and a hound. The hound chases the odd rabbit who seeks safety in a tree, but no two rabbits may lodge in the same tree so the rabbit already there must seek other shelter. When the hound catches a rabbit, that rabbit becomes the hound and the hound becomes a rabbit. Rabbits and trees should change places frequently so that each can participate actively in the game.

Slap Jack.

Players are seated in a circle on the floor or ground. One player runs around the outside of the circle and tags another as he runs. The one tagged must jump up and run around in the opposite direction. When the players meet, they must shake hands. The object of both runners is to get back first to the vacant place. Whoever succeeds wins, and remains in the place and the one left out becomes runner, tagging some one else.

The May Pole Dance.

For programs in the open air when spectacular drills are desired, there is nothing more pleasing than the May Pole Dance, and it is equally appropriate for young people from the rural schools, grades, high schools or colleges.

For the drill there should be an even number participating, from twelve to twenty, or even twenty-four; the pole should be from ten to twelve feet long and the streamers should measure from three to three and one half yards. Streamers about twelve inches wide make a more effective drill than narrower ones.

The following is the order of the drill.

A circle is formed around the pole, with the children facing out toward audience.

1.

Salute audience	8 counts
Turn toward pole	4 counts
Salute pole	8 counts
Turn toward partners	4 counts
Partners salute	8 counts
Turn center	4 counts
Pick up streamers	8 counts
Advance toward pole (walking)	8 counts
Salute pole	8 counts
Turn toward audience	4 counts
Salute audience	8 counts
Advance to original place	8 counts
Salute audience	8 counts
Turn center	4 counts

By salute we mean bend one knee low (the left knee when facing audience or pole, the knee away from the audience when saluting partners) bring right arm up to chest with a slight flourish, droop head slightly forward, keeping chest erect.

2.

Dance	8 counts
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(Hop lightly on right foot, crossing left foot over right knee, then hop on left foot, crossing right foot over left knee, etc.)

Girls turn toward right and advance once around the pole. (Advance thus—run lightly three steps and hop gently on count four, crossing foot over opposite knee, etc.) This makes girls hop beside each boy and midway between. Girls advance until they get around to their partners, boys keeping time to the music by crossing first one foot, then the other over opposite knee.

Partners salute	8 counts
Girls turn	4 counts

Then girls go back around to place in the ring, using the same step (run three steps and cross step.)

Hold places	4 counts
-------------	----------

3.

Boys walk toward center—4 steps.

Boys circle twice around the pole with the same run and cross step as used by the girls in No. 2.

Girls keeping time as boys did in No. 2. When twice around boys turn—4 counts. Retreat twice around and advance to places in the circle.

4.

Partners face

4 counts

Boys advance right and on the outside. Girls advance left and on the inside. Advance with the same running step, this time boys and girls hop side by side every time they pass.

When partners reach each other after passing once around they salute—8 counts, then turn and retreat.

When back to places in circle partners salute.

5.

Partners face

4 counts

Salute

8 counts

Then advance, boys pass right of first one they meet, then pass to left of No. 2, pass right of No. 3, left of No. 4, etc.

Girls advance in the same manner, passing first to the left, then to the right, then left, etc., plaiting in and out until at least one third of the pole is wound, then drop streamers.

There should be good, brisk, sprightly music for this, and the whole drill should be as light and airy as possible.

Rose Drill.

Below is a simple but very artistic little drill which can be used indoors or out on the lawn. Long-stemmed roses, real or artificial, or any other flower with a long stem, such as chrysanthemums, carnations, etc., may be used.

There must be an even number, and it would be well to have the girls about the same height.

1.

All form circle

Partners curtsy

8 counts

Turn center

4 counts

Curtsy toward audience

8 counts

Turn toward right

4 counts

2.

Girls circle once around, stems in inside hand with roses drooping over their heads. (Advance using follow steps, thus—glide forward with right foot on count one, left foot follows on count two and right foot advances again on count three, then the left foot leads off, etc.)

Stop when back to places in ring and dance lightly—8 counts, (using cross step, one foot crossing lightly over opposite knee, etc.)

3.

Girls glide center and curtsy, then lift roses and form a pyramid in the center.

Hold pyramid while boys glide once around in ring outside.

Boys stop when back to places in circle.

Girls glide forward to places in ring and curtsy.

4.

Partners face, then advance, boys going toward right of first girl, then left of No. 2, right of No. 3, weaving in and out.

Girls advance left of first boy, right of No. 2, left of No. 3, etc.

A figure is formed each time the boys and girls pass, and held four counts, thus, as boys pass right of girls they stop, lift rose in right hand and let it curve over the girl's head, touch toes of right foot out to right, place left hand on hip and lean entire body slightly toward left, so that a straight line might be drawn from the head to the toes of the right foot. The girls assume the same position leaning toward the left, this makes each couple bend slightly toward each other and the stems of the roses cross above their heads.

5.

Form straight lines so that sides are toward audience and a wide aisle between parallel lines.

Curtsy

8 counts

Advance center and curtsy

Glide back and curtsy

Then Nos. 1 and 2 of each line (numbering from audience end) move slowly toward right (using audience as the front), Nos. 3 and 4 at the same time move toward left, Nos. 5 and 6, at the same time move toward the right and Nos. 7 and 8 toward the left, etc. This leaves them in groups of four and at equal distances apart.

Then each group lifts roses forming a pyramid in the center and glides twice around in a circle.

Next, couples join inside hands forming a cross with the arms, outside hands carry roses curved over the head. Glide twice around in circle.

6.

Drop quickly back to original places in circle, right face, clasp both hands on stem of rose, outside hand just below flower, inside hand at end of stem, rose pointing outward. Lift arms up in front about even with chest and advance once around using running hop step (run three steps and hop on count four, crossing foot over opposite knee).

Then when back to place

Face audience

4 counts

Kneel

8 counts

Toss roses over heads forming a pole in the center.

Rise

4 counts

Glide off.

SPECIAL DRILLS FOR GYMNASIUM USE

CHAPTER XVIII

The following drills are in common use in high schools and college gymnasiums today. The apparatus required is light and inexpensive, and within the range of every teacher.

Pole Drill.

Curtain poles from ten to twelve feet long should be used for this drill. Girls form in straight lines in groups of five or six each and several feet apart. Girls of each group take one pole in their right hands, and another pole in their left hands. All the groups work in unison.

1.

Lift right poles up at right shoulder	
high	4 times
Lift left poles up at left shoulder high	4 times
Alternate movement	8 times
Lift both poles	4 times

2.

Same as No. 1 except that poles are raised above head.

3.

Same as No. 1, combining a foot movement. Touch right foot out to right as poles are raised right, then bring poles back to hips instead of returning them to sides.

When both arms come up together, rise on tiptoe for foot movement.

4.

Same as No. 2, combining foot movement.

5.

Step forward with right foot to the	
right front diagonal lifting pole to	
right front diagonal	4 times
Same with left	4 times
Alternate	8 times
Both arms without any foot move-	
ment	4 times

6.

Same as No. 5 stepping and pointing	
pole toward rear right diagonal	4 times

Left	4 times
Alternate	8 times
Both arms without moving feet	4 times

7.

Pivot on heels and right face, right pole out in front of body shoulder high, left pole on hips	4 times
Left	4 times
Alternate	4 times

8.

Same as No. 7 having lines face each other	4 times
Face apart	4 times

9.

Pivot on heels and charge toward right, bending knee low, poles shoulder high	4 times
Same left	4 times
Alternate	4 times

10.

Lines face and charge	4 times
Lines face apart and charge	4 times
Alternate	4 times

11.

Same as No. 10, but charge, then kneel and hold four counts.

12.

Feet wide apart, right poles above head and well out toward right side, left poles out at left side hip high, making a diagonal slant from right to left poles.

Bend toward right side letting right poles down toward floor while left poles go up toward ceiling, then bend toward left reversing the poles, then bring poles to position on hips.

Same, beginning with the left pole raised above head and right pole down.

13.

Then have lines lift inside poles with outside poles hip high on the outside and bend toward each other, then bend away from each other, coming to position with poles on hips.



ONE POSITION FROM THE "VENETIAN FLORAL DANCE,*" BY
GEORGE BISHOP.

*Copyrighted by Edgar S. Wesner.



MAY POLE DANCE.



CROWNING OF THE MAY QUEEN.



CHILDREN'S CHAUTAUQUA AT HORTON, KANSAS—457 CHILDREN IN FREE MORNING HOUR WORK.



MOTHER GOOSE AS TRAINED AND PRESENTED BY A CIRCUIT CHAUTAUQUA.



THE SPANISH SCENE FROM A PAGEANT PRESENTED AT THE JEFFERSONVILLE, MO., CHAUTAUQUA.

For beginning students, this drill with the poles is one of the best that I have ever found because it makes pupils work in unison; when one moves all must do so, and one false move on the part of any pupil throws the whole line out of order, thus they soon learn to co-ordinate. The muscular work and the free bending also help to make it a valuable drill.

Wand Drill (No. 1).

For this drill, wands about three feet long and three-quarters of an inch in diameter should be used. Your furniture or hardware dealer can supply them at a very reasonable price (two or three cents each), so any teacher can easily provide her class with wands even if no apparatus is furnished by the school.

For small children we use just the straight movements of the wand as given below, but for pupils in the eighth grade or older we add a twist to each movement making it "The Twisting Wand Drill." This twist is executed in the following manner:—Clasp hands on wand, one hand at each end, palms up, raise the point of the right hand wand and bring it downward on the inside of the right arm and on around in a circle and straight out at the right side, the right wrist turning around with the wand and the hand slipping around on the wand. The hands turn completely over, the movement begins with the palm up, and the palm is up again after it makes the turn. Twist back to place in the same way. With a little practice this twist can be done quickly and easily.

1.

Wands out at right side shoulder	
high	4 times
Left	4 times
Alternate	4 times

2.

Wands pointing out at right diagonal	
shoulder high	4 times
Left diagonal	4 times
Alternate	4 times

3.

Wands resting on shoulder pointing	
right, back of head	4 times
Left	4 times
Alternate	4 times

4.

Wand back of head pointing toward right diagonal	
Left diagonal	
Alternate	

5.

Wand held in vertical position against right side
 Left vertical
 Alternate

6.

Combine Nos. 1 and 2 doing the straight right and left, and the diagonal right and left, alternating from one to the other without coming to position between.

7.

Alternate Nos. 3 and 4 without coming to position between.

8.

Combine Nos. 1, 2, 3, and 4, thus—straight right and left, diagonal right and left, right and left back of head, diagonal right and left back of head, and do not come to position between the movements.

9.

Same as No. 8 except that we insert the vertical movement between Nos. 1 and 2, and 3 and 4.

This combination work is valuable because of the mental training. The instructor should have the pupils memorize the drill and rely entirely on themselves while giving it.

Wand Drill (No. 2).

1.

- a. Charge toward right, point wand toward right, shoulder high.
- b. Feet together, wand over head.
- c. Charge left, pointing wand left, shoulder high.
- d. Position. Hands should be at end of wand and palms down.

2.

- a. Charge toward right front diagonal, wand out in front shoulder high (Chest should be held high and strong).
- b. Feet together, wand back of head.
- c. Same as (a) to left.
- d. Position.

3.

- a. Charge to right front diagonal, wand pointing up to right diagonal.
- b. Hold same position of body, and shift the wand and point it down to rear left diagonal.
- c. Shift wand back up to right diagonal.
- d. Position.

4.

Same as No. 3 toward left.

5.

- a. Charge to right front diagonal, wand pointing downward to rear left diagonal.
- b. Shift weight back to the left foot (without moving feet) and shift wand upward to front right diagonal.
- c. Shift body forward, and wand back to rear diagonal (same as position a.)
- d. Position.

6.

- a. Touch right foot out to the right side, swing wand out to right shoulder high.
- b. Swing right foot over to left side and touch toe to floor on left side, at the same time swing wand over end for end (right hand swinging over toward left).
- c. Swing foot and wand back over to right.
- d. Position.

7.

Same as No. 6 toward left.

8.

- a. Pivot on heels and face toward right diagonal, wand held high over head.
- b. Charge right foot to right diagonal, while wand is taken in left hand and brought forward in a complete forward circle, then held in left hand pointing straight up toward ceiling on count three; right hand is held on hip.
- c. Swing wand in complete backward circle and catch in right hand on count three.
- d. Position.

9.

Same as No. 8 toward left.

10.

Change position of wands, holding them palms up and forward.

Charge toward front right diagonal, twist wand and point it to upward right diagonal. (Twist is described in Wand Drill No. 1).

Position.

11.

Same as No. 10 charging and pointing wand toward rear right diagonal, using the wand twist.

Same left.

12.

Same as 10 charging straight right.

Same left

13.

- a. Charge right diagonal twisting wand and pointing it up to right diagonal.
- b. Charge forward with left foot to left diagonal pointing wand up to left diagonal.
- c. Same as (a).
- d. Pivot and rear face. Then charge back to place in the same manner, pivot and front face after the third charge. (Keep chest high and strong).

Each exercise should be done about four times each and four-four time should be used.

Wand Drill No. 3.

1.

- a. Swing wand out to right side, touch right foot out to floor on right side with the left knee well bent.
- b. Wand stretched high above head, feet together.
- c. Same as (a) toward left side.
- d. Position.

Alternate right and left—4 times.

2.

- a. Rest wand on shoulder back of head.
- b. Bend trunk forward.
- c. Come up to erect position.
- d. Position with wand down.

3.

Same as No. 2 bending backward. (Care should be taken not to strain the back).

4.

- a. Swing right wand to right, touch right foot out to right, left knee bent low.
- b. Shift wand to left, bending right knee low.
- c. Wand over head.
- d. Position.

5.

Same as No. 4 toward left.

6.

- a. Wand resting on shoulder back of head.
- b. Bend toward right.
- c. Come up to erect position.
- d. Bend left.
- e. Position.

7.

- a. Swing wand to right, touch right foot out to right, bending left knee.
- b. Lunge toward right swinging wand to left back of head.
- c. Lunge left, wand swinging right in front of chest.
- d. Position.

8.

Same as No. 7 toward left.

9.

- a. Lunge forward right diagonal, wand pointing up to right diagonal.
- b. Lunge right leg around to rear of left leg, bend right knee, face rear left diagonal and point wand obliquely downward to left, behind body.
- c. Same as (a).
- d. Position.

10.

Same as No. 9 toward left.

11.

- a. Lunge obliquely forward toward right, wand out to right diagonal shoulder high (both hands on a level).
- b. Bend trunk forward bringing wand within an inch or two of the floor.
- c. Same as (a).
- d. Position.

12.

Same as No. 11 toward left.

13.

Same as No. 11 lunging and bending toward rear.

14.

Have groups of four work together, all lunging toward common center, then all lunging away from common center. This makes a very attractive figure when well worked out.

15.

- a. Lunge right foot front, wand stretched high above head.
- b. Lunge right foot to the rear, wand pointing rear, left hand clasping wand in front of right shoulder.
- c. Same as (a).
- d. Position.

16.

Same as No. 15 toward left.

17.

- a. Bend knees, cross right arm over left (arms forming a cross).
- b. Jump to straddle position, changing position of arms, this time left crosses over right.
- c. Same as (a).
- d. Position.

Anvil Chorus (Dumb Bells).

1.

Bells on hips.
Bells down at sides.
Bells on chest.
Bells at side.
Bells behind back.
Bells at side.
Bells on shoulder.
Bells at side.

Repeat four times.

2.

Charge right foot to right oblique, bells on hips.
Right face, feet together.
Charge right foot back.
Front face, feet together.

Same to left side, bells still on hips. Repeat.

3.

Cross right foot over left, bells on hips.
Pivot on toes and rear face, bells down.
Again cross right foot over left, bells on hips.
Pivot on toes and front face, bells down.

Same left. Repeat.

4.

Pivot on heels and right face, bells on hips.
Front face, bells down.
Left face, bells on hips.
Front face, right bell on shoulder, left bell out in front
in position for anvil strike.

5.

Anvil strike sixteen times.

6.

Strike bells over head.
Bells down.
Strike bells in front shoulder high.
Bells down.

Repeat.

7.

Strike bells below waist in front.
Strike bells behind body.
Repeat four times front, four times behind body.

8.

Charge to right, strike bells over head.
Position.
Strike bells back below.
Front strike.

Back strike.
Front strike.
Position.

9.

Interlude.
Bells on chest.
Bells out at side, palms front.
Bells up toward ceiling.
Bells front shoulder high.
Bells at side shoulder high.
Bells down at side.
One sharp click in front of body below waist on count thirteen.

10.

Stamp right foot, gaining ground, two steps.
Strike back below.
Position.
Same left.
Repeat.

11.

Strike front below waist.
Charge right foot to right oblique.
Strike bells over head.
Charge right foot back, strike back below.
Sink to right knee and strike over head.

Dumb Bell Drill.

1.

Run in place, at the same time combining the following arm movements—

- a. Bells on hips.
 - b. Bells at sides.
 - c. Bells out shoulder high.
 - d. Bells stretching above head.
- Repeat this order four times.

2.

- a. Jump to straddle position, bells out shoulder high.
- b. Feet together, bells strike over head.
- c. Charge right foot forward, right bell up in front at right diagonal, left bell back at rear diagonal (Hold four counts).
- d. Position.

3.

- a. Lunge forward to right, bells out in front shoulder high, palms down.
- b. Turn left, face rear without lifting feet from floor, simply shifting the weight, arms out at side shoulder high.

- c. Strike bells behind body.
Strike bells front of body.
Strike bells behind body.
- d. Position.

4.

- a. Lunge forward right diagonal, right bell out in front shoulder high, left bell on shoulder.
- b. Lunge right foot around to rear left diagonal, bending left knee, left bell out shoulder high, right bell on shoulder.
- c. Same as (a).
- d. Position.

5.

- a. Lunge forward right and strike bells under knee.
- b. Position, strike bells one sharp click behind body.
- c. Rataplan 4 clicks.
- d. Position.

(Rataplan means clicking the little finger end of the left bell with the thumb end of the right bell, then reverse the movement turning bells toward right and clicking the right bell with the left, etc).

6.

- a. Lunge right foot to the left front diagonal, bells out at side shoulder high.
- b. Lunge left foot to the right front diagonal, thumb ends of bells on head.
- c. Pivot on toes and rear face, hands on hips.
- d. Position

Repeat coming back to front face.

7.

- a. Lunge right foot to the right, right bell on left shoulder, left bell out at side shoulder high.
- b. Bend toward right, and touch thumb end of right bell to the floor, left bell on left hip.
- c. Same as (a).
- d. Position.

8.

- a. Feet wide apart, bells on hips.
- b. Forward bend and touch thumb ends of bells to floor.
- c. Turn and face left, charging right foot over left foot, bells out at side shoulder high.
- d. Same as (a).
- e. Same as (b).
- f. Same as (c).
- g. Position.

9.

- a. Lunge right foot forward, click bells behind body.
- b. Click bells forward under right knee.
- c. Click bells behind body.
- d. Ratanplan three times.
- e. Position.

Rubber Ball Drill.

A small ten cent solid rubber ball is used in this drill. The free hand is held on the hip through-out the exercise. Waltz time should be used.

1.

Toss ball from right hand and catch—6 times.

Same left hand.

Toss from right hand and catch in left, alternating the movement—12 times.

2.

Bound from right hand and catch—6 times.

Same left—6 times.

Alternate—12 times.

3.

Toss from right hand, let bound and catch in left, alternating—12 times.

4.

Toss under left arm, bending body toward right, catch ball in the left hand—6 times.

Alternating—6 times.

5.

Step left foot forward, and toss ball under left arm toward left diagonal, bending body toward right. Catch ball in left hand, shift weight backward and toss ball under right arm, catching in right hand. Alternate—12 times shifting weight backward and forward.

6.

Right arm at side, raise left arm at left side, and bound the ball over the left arm catching in left hand.

Alternating—12 times.

7.

Charge diagonally forward with left foot, knee bent low and bound ball over raised left arm. Sway weight backward and toss ball under right arm. Alternate—12 times.

8.

Charge diagonally forward left foot, toss ball front with side arm circle from right hand, sway and bend body back and catch ball without changing position of feet—6 times.

9.

Walking forward, toss ball from right hand catching in left alternating the arm movement.

10.

Combine walking with the alternate bound and catch movement.

Medicine Ball Movements.

Have the class form in a circle or parallel lines for the medicine ball work. Strive to get up a free perspiration, by keeping the ball moving rapidly from one to the other.

1.

Push ball forward from position against right shoulder.

2.

Rest ball against left shoulder and throw it, using both hands.

3.

Rest ball against chest and throw it, using both hands.

4.

Rest ball on head and throw it forward.

5.

Rest ball on right hip and throw it.

6.

Throw ball from position on left hip.

7.

Stand, feet apart, and toss from between legs.

8.

Turn back and toss backward from between legs.

9.

Bound ball forward and bat it forward with hands.

10.

Take turns bounding it against the wall and catching it.

CONCLUSION

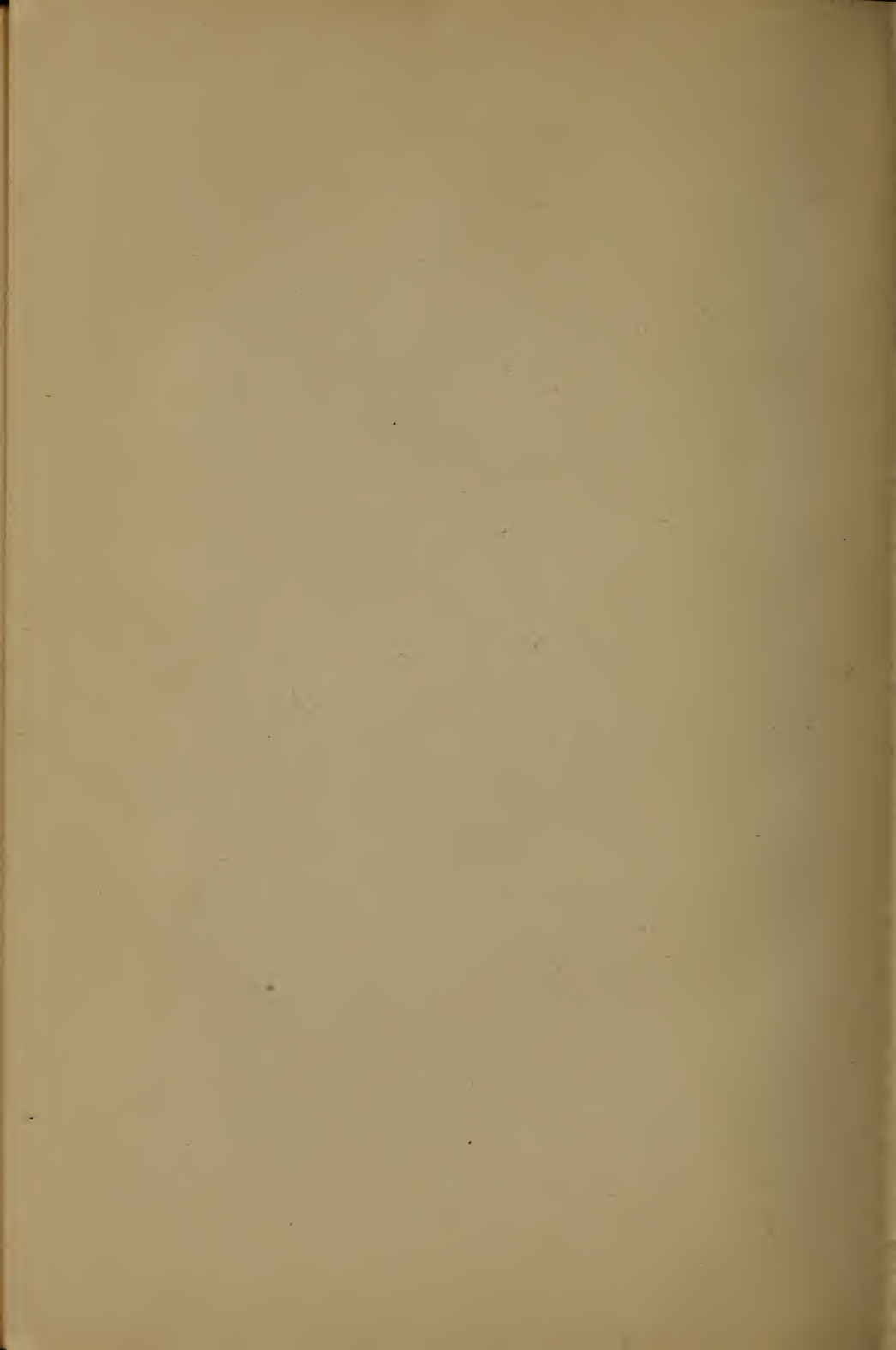
The value of such a book as "Health Rules and Danger Signals" is more than merely teaching the means of attaining and preserving good health. Scientists, physicians, and metaphysicians now agree that *mental suggestion* is the *cause* of many of our ills. That is one of the greatest harms that patent medicines do. The very descriptions on the bottles become a diagnosis of the reader's ills, and he dopes himself for troubles which are all in the mind. The science of preventative medicine and the new therapeutics are not open to this serious criticism. "Health Rules and Danger Signals" is grounded on the newer and more practical philosophy, that is why it works by indirection.

Teachers are now in a larger sense our best physicians because they are forming, through play, those habits which prevent disease, by building a stronger physique. The Chautauqua Movement has opened this great new field to thousands of young men and women who have fitted themselves to direct community play and community aspirations through play. One school of oratory here in Chicago last year graduated forty-six, thirty-three of whom went right from college to the Chautauqua platform as directors' of circuit Chautauqua play, a work which every Chautauqua features in some form or other.

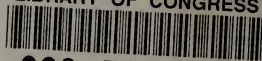
The University of Wisconsin conducts about seventy-five Chautauquas in the Badger state. The Wisconsin University, by the way, is recognized as one of America's greatest educational institutions, and here is its estimate of this kind of work:

"Naturally the boys and girls have been uppermost in the minds of those who have the arrangements in charge. Wisconsin Chautauqua will offer facilities to the children and young people for wholesome recreation. A playground worker will remain in the community for six days, teaching the children games, telling them stories, talking to the parents about the welfare of the children, and in general stimulating and organizing the intellectual activities of the young people of the community. There is no intelligent person today who would question the value of this work. Every up-to-date city has a playground organizer; every up-to-date home gives attention to play. The value of teaching children to play properly can not be overestimated. It socializes them, it teaches them the rights of others, it directs their energies along right lines, it develops them physically, morally and intellectually."

To teachers, parents, and far-sighted community builders, this book should make its strongest appeal. It is a book that should not be damned by being catalogued in the dusty tomb of any library graveyard. It is a tool, a guide, a living reality, and should be read, then studied, then used as a reference book. It should be distributed in numbers, for its real power lies in its ability to direct community health and happiness by promoting individual betterment



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